AUTO-INTOXICATION AND DISINTOXICATION

GUELPA

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AN ACCOUNT OF

A NEW FASTING TREATMENT IN DIABETES AND OTHER CHRONIC DISEASES

BY

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TRANSLATED BY

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WITH AN INTRODUCTION BY THE TRANSLATOR

AND

A CHAPTER ON THE USE OF THE METHOD IN THE TREATMENT OF MORPHINE ADDICTION

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TRANSLATOR'S INTRODUCTION

At the Annual Meeting of the British Medical Association, held in London in July, 1910, a paper was read by Dr. Guelpa, of Paris, on "Starvation and Purgation in the Relief of Disease."* In his paper Dr. Guelpa gave an outline of a new treatment, combining periods of abstinence with purgation, which had given him remarkable results in diabetes and other chronic diseases, and cited two cases, one of diabetes with commencing gangrene and the other of severe and old-standing gouty arthritis, in which the "disintoxication" treatment was applied with a success one certainly could not look

* *British Medical Journal*, October 8, 1910.

for with any confidence from any methods of treatment in ordinary use. Dr. Guelpa's paper excited little attention in this country, in spite of the striking nature of the results cited, and it would hardly be going too far to say that nine out of ten English medical men are entirely unacquainted with Guelpa's work, in spite of the immense amount of interest it has excited in Paris, and the important discussions to which Dr. Guelpa's various papers, read before the *Société de Médecine* and *Société de Therapeutique* have given rise. If one tithe of the claims made by Guelpa for the disintoxication treatment can be substantiated, this neglect of the method is much to be deplored. It is not entirely to be wondered at, however, seeing that up to the present Dr. Guelpa's very brief paper, alluded to above, and a few letters in the *Lancet* are the only contributions to a discussion of the subject which have appeared in the English medical periodicals. It was with a view to bringing

Dr. Guelpa's account of his method rather more widely before the profession in this country that, when I met Dr. Guelpa in Paris in February last, I asked and obtained from him permission to translate the main portions of his work, *Auto-intoxication et Desintoxication.*

For an account of the reasoning which led Dr. Guelpa to the conclusion that the essential factor in many chronic diseases is a condition of auto-intoxication, and that we should, therefore, in our treatment of such diseases, aim at relieving the organism of its encumbering effete and toxic matters, I would refer readers to Dr. Guelpa's own words in the ensuing pages, where the logical process is stated with admirable clearness.

The importance of auto-intoxication as a factor in the evolution of many states of chronic disease is becoming more and more widely recognized. The recent careful experimental work of Chittenden and Fisher

points very strongly to the conclusion that health, strength, fitness, weight, and nitrogenous equilibrium, can be well maintained on an amount of proteid food which is about one-third of the quantity laid down as a necessary minimum by the older writers on problems of nutrition, such as Voit. The actual practice prevailing in most modern civilized communities being, broadly speaking, in accordance with the views of Voit and others who maintain the necessity of a large proteid ration, the inference would seem inevitable, unless Chittenden's work can be shown to be fallacious, that in civilized countries it is usual to consume a good deal more proteid food than is required by the individual for the all-round maintenance of healthy nutrition. Chittenden has raised the point whether this habitual consumption of an amount of proteid food considerably in excess of the physiological needs of the individual can be regarded as either beneficial or indifferent—whether it ought not rather

to be regarded as almost certainly harmful. It must be borne in mind that the excess of proteid is taken mainly in the form of flesh food, a form of food rich in purins, and prone to undergo decomposition in the alimentary canal, with formation of toxic substances probably somewhat of the nature of ptomaines. It would appear improbable, on the face of things, that quantities of flesh food largely in excess of the needs of the individual can be consumed day by day without leading in very many cases to evil results—to a condition of self-poisoning, in fact, or auto-intoxication. Though the reality of the condition known as auto-intoxication, and the importance of the rôle it plays in the evolution of diseased states, are very widely recognized nowadays in the medical profession, that recognition has exercised singularly little influence on treatment, whether preventive or curative. Dr. Guelpa, however, makes the deduction which logically follows from it, and, finding an

individual suffering from illness which he considers to be an expression of a condition of self-poisoning, says: "The primary object of treatment in this case should be to relieve the patient of the poisonous matters or toxins which are making him ill, and to do this as rapidly as possible." This process of removal of toxins Dr. Guelpa terms "disintoxication," and his method of carrying it out is to prescribe complete abstinence from food for a few days and a copious daily purge, his object being (*a*) to induce the organism, by the withholding of food, to "burn up," so to speak, its waste, effete and toxic matters, and (*b*) to remove the products of this combustion freely and regularly. This abstinence-purgation treatment sounds severe. If, however, a bland saline purgative such as sulphate of soda (Hunyadi Janos water or simply a dilute solution of the salt) be used, the treatment can be carried out for a period of three days without any hardship or suffering. Dr. Guelpa's

statements in this regard I have verified repeatedly.

It is in the treatment of diabetes, a disease which he regards as pre-eminently an expression of auto-intoxication, that Dr. Guelpa has made most extensive employment of his method. The results obtained are very remarkable, and are such as cannot be obtained with any approach to certainty by any other method. Diabetic gangrene is generally regarded as an almost certainly fatal complication, and one whose progress it is impossible to arrest by treatment. Guelpa, however, records cases in which amputation was about to be resorted to, but in which the disintoxication treatment led to an arrest of the gangrenous process and to recovery of parts already cyanosed and insensible.

In a large percentage of cases the first three days' abstinence-purgation treatment removes sugar completely from the urine. Sugar returns when food is resumed, but in less percentage than before the fast. A

second treatment again removes the sugar, which again returns in diminished quantity when meals are recommenced. A third fast still further diminishes the sugar, and the patient can then, if content to live abstemiously, and take a short fast every month or so, keep the sugar at a very low figure, or even get rid of it completely and permanently. The method gives a control over the symptom *glycosuria* such as is given by no other treatment, and the moral importance of this to diabetic patients will need no insisting on to such patients or their physicians.

It is natural that physicians and others without personal experience of the method should regard a combination of fasting with purgation as a very severe treatment. A very little actual experience, however, suffices to convince one that this is a mistaken view, and that the treatment involves practically no suffering or hardship.

In cases of severe diabetes a patient may

actually be better off on balance of nutritional income and expenditure while abstaining completely from food than while on an ordinary antidiabetic diet. This is shown in a very interesting manner by Dr. Bardet, who, in a speech delivered in the discussion on a paper of Dr. Guelpa's, read before the *Société de Médecine*, puts the case of a patient suffering from very severe and intractable diabetes, who had just undergone the abstinence cure, into the form of a kind of balance-sheet. Dr. Bardet's whole address is of such interest and importance that no apology is, I think, needed for quoting from it at some length. After discussing and criticizing unfavourably some of Dr. Guelpa's theoretical views, notably his explanation of the phenomena of hunger, Dr. Bardet says :

" Having listened to our colleague's communication, we have most of us met it in the manner most consistent with ordinary human nature—that is to say, by contradiction. It is

always so when new facts of a novel character are brought forward which conflict with conventional ideas with which we have long been imbued. I recognize the good faith and scrupulous scientific honesty of my friend Guelpa, but I must humbly confess that I was astonished at the statement that sugar could be made to disappear from the urine of inveterate diabetics by a hygienic measure so simple as the complete suppression of food over a period of three days, with a few doses of a purgative; I thought that the cases observed, must have been cases of simple alimentary glycosuria. That is why, in previous discussions, I, like most of my colleagues, spoke of simple restriction in diet as sufficient to bring about the results Dr. Guelpa had presented to us.

"Well, I recognize now that I was wrong, and that the extraordinary facts brought forward by Guelpa completely upset received ideas concerning the pathogenesis of diabetes. Once again material facts convict us of ignor-

ance, and show that views we have long cherished will not hold water!

"My first impulse was to contradict Guelpa, my second thoughts were better—I would endeavour to *control* him. I spoke about the matter at once to our colleague Professor Albert Robin, who had himself also been much struck by the facts brought forward by Dr. Guelpa, and chance enabled us to make a really startling therapeutic experiment."

"At the Beaujon Hospital there was at this time a woman suffering from grave diabetes of several years' standing. She passed enormous quantities of sugar, sometimes as much as 800 grammes (12,320 grains) in the twenty-four hours. She had been under Dr. Robin's alternating treatment, (antipyrin and arsenic in alternation), for some weeks. The treatment, however, had only succeeded in reducing the sugar to 160 grammes (2,464 grains). After a course of this treatment all medication was suspended for a time, and the patient was placed on the

diabetic diet usually prescribed in the hospital:

Meat ...	...	500 grammes (7,700 grains).
Potatoes	...	500 „ „
Green vegetables		500 „ „

Immediately before the commencement of the experiment, (the trial of the abstinence treatment), the patient passed 12 litres of urine (21 pints) in the twenty-four hours, the amount of sugar passed during the twenty-four hours immediately preceding the fast being 760 grammes (11,704 grains). The next day strict abstinence from food was commenced. Dr. Robin, however, did not consider it necessary to give the purge advised by Dr. Guelpa, with a view to preventing the patient suffering from hunger, for she was already without appetite and the intestine was not loaded. Even without the purgation, however, the patient endured her three days' fast with the greatest ease.

"I would remark here that this patient

represented perfectly the type of grave diabetes in which sugar persists in the urine in spite of regimen and other treatment. The emaciation though not extreme was very pronounced, and the amount of fat remaining in the muscular and cellular tissues must have been very small indeed.

"At the end of the first twenty-four hours of abstinence the sugar had fallen from 760 to *13* grammes, (11,704 to 200 grains), while the amount of urine passed in the twenty-four hours was 2 litres instead of 12.

"At the end of forty-eight hours sugar had completely disappeared, and the quantity of urine had fallen to less than ¾ litre. The general condition was excellent.

"This result, it need hardly be said, was truly surprising and unexpected. For my part, I should certainly not have believed beforehand that mere abstinence from food could have brought about, almost instantaneously, the disappearance of sugar from the urine of such a patient. In demonstrating

this to us, Guelpa has, it cannot be denied, done something both new and of great significance, for we shall see that a consideration of this fact leads to an entirely new statement of the problem to be solved.

"Several of the speakers who have taken part in this discussion, myself among the number, have drawn attention to the danger attaching to complete abstinence. Abstinence, indeed, does not mean a real suppression of utilized aliment, since in order to maintain body heat and provide energy for muscular movement the organism is obliged to draw on its own substance. This is why, in discussing the foregoing experiment, Dr. Robin said at once: 'This is very interesting, but we have had two days of a pure flesh diet, which will have placed our patient in a dangerous condition of auto-intoxication, and I should fear, in some patients, the onset of diabetic coma.'

"On the fourth day, therefore, the patient was placed on a milk diet, and sugar at

once returned, (80 grammes on a diet of 2 litres of milk : 1,232 grains—3½ pints). She was unable to digest the milk satisfactorily, so we were obliged to return to the anti-diabetic diet—meat, potatoes, and green vegetables—on which the sugar rose to about 120 grammes (1,848 grains). I leave undiscussed the further progress of the case, as it is irrelevant to the conclusion I wish to emphasize. Two points deserve attention : first the complete suppression of sugar by abstinence, then its return in considerable quantity directly food was again taken. I would ask you also to bear in mind the perfectly logical conception that this autophagic régime of three days' abstinence might be expected to produce phenomena of auto-intoxication.

" The total suppression of sugar proves that the process of digestion is to be considered in itself the sole efficient cause of the production of sugar. This cannot be denied, for in a patient who had been passing

regularly and for a long period the enormous quantity of 700 to 800 grammes of sugar daily, we have seen both glycosuria and polyuria disappear completely with the simple cessation of the digestive act. The phenomenon of sugar production must, then, be a very local one—that is to say, it must have its seat in the digestive mucosa, since the metabolic processes necessary for the production of heat and muscular energy did not lead to sugar production. This digestive origin of diabetic sugar is a very striking fact, which receives complete demonstration when we note the reappearance of sugar as soon as the process of digestion recommences. It is a fact also which cannot but profoundly influence our views concerning the treatment of diabetes. The cases of permanent cure, too, cited by Guelpa furnish additional proof of the truth of my deduction.

"Is autophagism, then, to be dreaded in the abstinence treatment? I do not think so, and I will give you my reasons. I have

gone into the matter fully with Dr. Robin, and will state numerically the conclusions at which we have arrived.

"Let us return to the history of our patient, and note again her diet on the eve of her treatment. She was taking, as we have said, 500 grammes each of meat, potatoes, and green vegetables. The matter may be stated in tabular form thus:

Weight.	Foods.	Albumin.	Carbo-hydrates.	Fats.	Calories.
500 grms.	Meat ...	85	—	80	1,060
500 ,,	Potatoes ...	10	200	10	930
500 ,,	Green vegetables ...	5	10	10	150
	Totals ...	100	210	100	2,140

"The diet, it will be seen, is arranged to furnish the 2,100 calories which are generally considered necessary. It will be noted also that albumin is present in very high proportion—in a quantity, in fact, considerably

in excess of the needs of the organism. It might reasonably be held that the 100 grammes of albumin ingested tend already to an excessive production of extractives commonly regarded as toxic in nature. At the same time, the diet is quite insufficient to cover the patient's expenditure. As has been stated, during the twenty-four hours preceding the abstinence treatment, the patient lost 760 grammes of sugar, a quantity representing nearly 3,200 calories; we supplied her with 2,100: there was, therefore, a deficit of between 1,000 and 1,100. But this is not all; we have to add to this deficit all the calories provided by the patient by the process of autophagy. The patient, though at rest, expended some muscular energy and maintained her body heat, and her expenditure for these purposes can hardly have been less than 1,600 calories. We have, then, with the 1,100 calories already in deficit owing to the loss of sugar, a total of at least 2,700 calories expended

in excess of the quantity furnished by the patient's food. It is plain, then, that even before the commencement of the abstinence treatment there was a deficit representing from 600 to 650 grammes of glucose, and that there was a very considerable autophagy already established. As a matter of fact, when one looks closely into the case one finds that the autophagy was greater before than during the abstinence; for whereas the autophagy before treatment corresponded to 2,700 calories, almost from the commencement of the period of abstinence the patient had only to provide the 1,600 calories necessary for the maintenance of temperature, and to supply a small amount of muscular energy. ' As a mere matter of arithmetic, then, our patient was in definitely greater peril of developing diabetic coma while she was being fed than while she was fasting.'

"The foregoing deduction is, in my opinion, of considerable importance, for it points to the conclusion that in severe cases of dia-

betes, when we have to fear the onset of coma, abstinence, in spite of the autophagy it necessarily involves, is our best means of warding off disaster, since the autophagy is actually less during abstinence than while food is being taken.

"I am glad to have had the opportunity of making these observations, and of demonstrating thereby the great value of our colleague Guelpa's communications. It is obvious that the abstinence treatment cannot be prolonged. Its periodical use, however, will certainly render signal service. We have in it a powerful weapon, which, wielded with knowledge, will give very remarkable results. Finally, if we cannot accept all the theories put forward by Dr. Guelpa in explanation of the facts he has thrown into relief, it is none the less true that he has rendered therapeutics a very great service in forcing medical men to recognize once more the disastrous influence of the ideas prevalent among them, as

among the general public, concerning the supposed necessities of alimentation. Once more we have brought forcibly to our notice the great influence exercised over the organism by the practice of over-alimentation. "In a state of nature animals are rarely dyspeptic, and the disorders of nutrition which are the melancholy appanage of humanity are to them almost unknown. It is sad indeed that the cerebral development of man, which, from many points of view, has produced results so admirable, has, unfortunately, led him to eat without need and to drink without thirst, and thereby, too often, to ruin his organism and shorten his days."

The following are brief notes of a case of diabetes I have had recently under treatment:

Mr. E. P., aged forty. The patient has suffered from diabetes for about four years. The disease having latterly resisted ordinary

antidiabetic treatment, the patient, acting under the advice of his own medical man, put himself under my care on June 26, 1911, with a view to a trial of Dr. Guelpa's disintoxication treatment. In spite of strict antidiabetic diet, the proportion of sugar excreted had not for some time been below 20 grains to the ounce, and recently, as the result of a certain degree of laxity as to diet, sugar has risen to 33 grains to the ounce, and the daily volume of urine has averaged about 5 pints, or 100 ounces. The daily sugar excretion has thus been about 3,300 grains. The patient has for a long time suffered severely and continuously from thirst.

On June 27, 28, and 29, the patient underwent Dr. Guelpa's abstinence-purgation treatment, abstaining entirely from food during the three days, and taking each morning a large dose of Hunyadi Janos water.

On June 30 the patient took 2 pints of milk. Owing to an oversight, no specimen of the urine passed immediately after the fast was procured for examination. The

urine passed during the evening of the 30th, after food had been recommenced for a day, showed 18 grains of sugar per ounce; the twenty-four hours' volume of urine, however, had fallen from 100 to 30 ounces.

From June 30 to July 10 the daily volume of urine varied from 20 to 35 ounces, and the proportion of sugar rose gradually until on July 10 it stood at 26·5 grains to the ounce. The patient was entirely free from thirst.

On July 11, 12, and 13, the patient underwent a second abstinence cure.

July 10: Sugar 26·5 grains to the ounce.

July 13: Sugar absent; absence of sugar confirmed by phenyl-hydrazin test.

July 17: Sugar 3·3 grains to the ounce.

July 23: Sugar 19·8 grains to the ounce.

July 25, 26, and 27: Third abstinence cure.

July 27: Sugar absent; absence confirmed by phenyl-hydrazin test.

August 3: Sugar 7·2 grains to the ounce.

August 12: Sugar 5·2 grains to the ounce. Average daily volume 35 ounces.

August 14: Patient went home, intending

to carry out at fortnightly intervals a one day's abstinence cure. He reports himself recently as feeling well, and as having gained 9 pounds in weight.

To sum up: This patient came under treatment suffering severely from thirst and polyuria. The disintoxication treatment removed both troubles, very much reduced the daily sugar excretion, (from about 3,300 to about 300 grains), and enormously improved the nutrition and general health. Sufficient time has not elapsed to bring about a complete cure, with permanent disappearance of sugar from the urine. There is, however, every hope that this will be the result if the patient adheres for some months to the abstemious diet advised by Dr. Guelpa, thus furthering the "re-education" of the liver and other important digestive organs, without which, of course, permanent cure is impossible.

It may be said that other methods of treatment will remove sugar from the urine of

diabetic patients, and that Dr. Guelpa has therefore done nothing very new or very striking. It is, of course, true that mild cases of diabetes respond to various methods of dietary treatment, and that sugar may be removed in certain cases by ordinary anti-diabetic diet, by Donkin's treatment, and other methods. It is, however, also true that many cases do not respond to any of these older methods of treatment, sugar persisting in the urine in spite of the utmost care and perseverance in carrying them out. Dr. Guelpa has furnished us with a method which will remove sugar even in these recalcitrant cases (provided the diabetes is not a mere incident in some grave organic disease, such as cancer, tubercle, or cerebral disease), and this is both a new and an important achievement.

My experience of the treatment, so far as it has gone, bears out Dr. Guelpa's statement, based, of course, on a very much more extended experience, that it is, when carried

out in suitable cases and with careful medical supervision, entirely free from risk. In no case have I seen it cause any suffering, beyond, perhaps, a little headache on the first or second day. Whether Dr. Guelpa's explanation of the fact be correct or no, his statement that patients can abstain entirely from food for three or more days without suffering in the least from hunger, so long as a copious dose of a bland dilute saline purgative is taken each morning, is entirely borne out by my experience. A very striking point, and one which goes to support Dr. Guelpa's view that his method does good by removing from the organism "encumbering waste and toxic matters," is that patients undergoing an abstinence-purgation cure show a steady improvement in colour and clearness of complexion during the fast.

The treatment is, of course, not one that should be carried out save under medical advice and supervision. Properly applied in suitable cases, however, I believe the method

will prove to have a very wide range of usefulness in the treatment of disease; and if by translating Dr. Guelpa's work I shall have helped to an extended trial of his method by my professional brethren, and so to an earlier determination of its exact scope and possibilities of usefulness, I shall feel abundantly rewarded.

Bovingdon, Herts.

AUTO-INTOXICATION AND DISINTOXICATION

Treatment of Diabetes.

For the past twenty years I have interested myself continuously in the question of the therapeutic effect of loss of weight in various acute and chronic diseases. I was led to a systematic investigation of the question by the researches of the lamented Dr. Dujardin-Beaumetz on the variations of weight observed in sick persons, especially those suffering from enteric fever. In collaboration with his pupil, Dr. Stackler, he proved by a series of curves recorded by a registering balance, on which the patient's bed was placed, that the more regular and rapid the patient's loss of weight, up to the disappearance of the

pyrexia, the quicker and more favourable was his course to recovery. If the curve of weight showed little or no variation, one might be quite certain that the temperature remained high.

This research, which, for its authors, was without any special result, has been to me as a beacon-light throughout the long period of my work as a medical practitioner. 'I have found it an invariable rule that, in febrile affections, the more promptly emaciation sets in, and the more definitely it establishes itself, the more sure and rapid is the patient's progress towards recovery. Conversely, when the patient fails to exhibit an emaciation proportional to the intensity of his pyrexia, the illness is always graver and of longer duration, and the convalescence more prolonged and more interrupted.' All this, it seemed to me, proved, so to speak, mathematically, that disease is a state determined and kept up by the presence within the body of a quantity of products of fermentation—

toxines and the débris of poisoned tissues—which the organism must eliminate before it can return to a condition of health. The more rapidly this elimination is effected, the more prompt and perfect is the re-establishment of health, often, indeed, at a level considerably above that obtaining before the illness.

These ideas I have applied consistently and without intermission throughout an extended period of busy medical practice, and I have no hesitation in saying that I have invariably seen them confirmed by the event. So much is this the case that a feeling of weakness on the part of my patients gives me no longer any anxiety; this false sensation of weakness being, in reality, nothing but an expression of a condition of encumberment with toxic products and cellular débris, of which it is important to relieve the organism as soon as possible. The proof of this lies in the fact that in these cases, if an efficient purge be given,

the patient feels, *ceteris paribus*, less weak on the following day.

The question of the feeding of my patients, then, especially in febrile affections, never troubles me, convinced, as I am, that the so-called *strengthening* articles of diet merely strengthen the disease at the expense of the patient. My rule is not to allow food until the temperature has become normal—that is to say, until the excess of toxic and waste matter has been, so to speak, burnt off and eliminated. I am certain of my facts when I state that diseases treated thus are shortened in duration, and that convalescence is more rapid and in all respects more satisfactory than when treatment is carried out on other and more customary lines.

There is a close analogy between the foregoing principles, as applied in the treatment of the animal organism, and certain other principles and rules of action which we find adopted, though without any realization of the analogy, in the social organism.

In any administration or government, whether on a large or a small scale, if care is not taken to renew regularly the personnel engaged in the administration, as deficiencies due to age or impaired activity declare themselves, the efficiency of the administration is bound to be impaired little by little, and complaints are certain to be heard from the governed or from those for whom the administration acts.

Similarly, in a large shop, if the ordinary course of business does not lead to a complete and regular disposal of stock, a competent management will, as is, of course, common knowledge, decide from time to time on a special "sale," in which the stock of goods, soiled, damaged, or merely out of fashion, is got rid of by means of the necessary reductions in price. Were it to proceed otherwise, the concern would march steadily in the direction of bankruptcy.

Another striking example of this analogy

between the working of the social and the animal organisms is presented by a fortified town. It contains inhabitants, troops, food, and munitions of war, and will possess some system for the disposal of refuse of all kinds.

Our body is also a fortified organism, constantly menaced and attacked by an infinity of enemies. It also has its inhabitants—the fibres and cells of the tissues; its troops, purveyors, scavengers, and police—the red and white blood-corpuscles, and more especially the phagocytes; its supply and reserves of food, which are represented more particularly by the adipose tissue. But, more prudent and far-seeing than any human organization, Nature has provided it abundantly with the means of insuring as regular and complete an elimination as possible of débris and toxic products. It eliminates them by way of the intestines, the kidneys, the skin, the bronchi, etc., and when these prove insufficient it increases the combustion of these harmful matters by its cellular

mechanism and by oxidation brought about by pulmonary action.

What, then, would you say, to continue uor comparison, of a garrison which, after having assembled and accumulated the largest possible number of troops and quantity of provisions and munitions, should wait in inactivity for the enemy, living from day to day on supplies brought in from outside, without troubling itself about the renewal of its munitions or of its reserves of food ? Of a surety, in the moment of danger the stores would be either barely utilizable or, at any rate, inferior in quality to those possessed by the enemy, and the spoiled food-supplies would lead to serious outbreaks of disease, which would paralyze the energies of the defence.

Well, man acts very frequently with no less lack of intelligence. The obese individual, particularly easy in his mind, and perhaps even vain of his reserve stores, never thinks about renewing them. Later, at the time of combat, when illness comes on,

his phagocytes, of poor vitality and badly nourished by stale and damaged stores, are unable to carry out their defensive duties efficiently, and he succumbs to the enemy's attack, or, if he recovers, does so slowly and with difficulty.

An eminent veterinarian colleague, the late M. Chuchu, to whom I had been explaining my views as to the need for a renewal of our tissue reserves from time to time, said: "You are quite right, and a very clear proof of the correctness of what you say about the obese individual is furnished by what we veterinarians observe in animals. It is a fact universally recognized by us that when you have fattened a beast, if, instead of slaughtering it, you endeavour to keep it, it will prove very difficult to do so, because their more functionally noble tissues, smothered by the fat which has invaded them and more or less compromised, have lost their capacity for resistance and for the normal performance of vital functions."

This is also the cause of the untoward and fatal results of disease too often observed in children rendered fat and flabby by an unintelligent hygiene on the part of parents and nurses. These children, regarded by the ignorant as pictures of health, if attacked by some slight intestinal or other disorder, are apt, especially in the hot weather, to succumb with terrible rapidity, while others, delicate in appearance, but in reality of firmer fibre and less embarrassed vitality, come safely through the most acute infections.

From the above facts and considerations to the deduction that there would be advantage in furthering, in every safe and possible way, the elimination of the organism's damaged and worn-out cells, in order to permit of the reproduction of others, fresh, efficient, and unpoisoned, was but a step. That deduction I made, and upon it I have acted in my practice for the last fifteen years. I have made about forty experiments on myself, and have treated a large number of my patients

by a method whose object has been such an elimination as is above alluded to. My results, therefore, representing as they do a prolonged experience of the method in practice, cannot fairly be denied a certain weight.

We know that, in disease, Nature, apparently in order to concentrate the resistance of the menaced organism, generally takes from us all desire for food. It limits or suspends in this way the introduction of ingesta which might undergo harmful decompositions, and which would be useless, if not dangerous, to the organism. Further, it leaves it to the organism to furnish from its own elements the materials for combustion necessary to maintain life ; and it is only when some part of those elements, (and that part the least viable), proportional to the nature and violence of the disease, has been burnt up and eliminated, that health returns, perhaps in greater measure than before

If, then, when apparently in good health, or still more when certain manifestations lead

one to infer a condition of insufficient cellular combustion, we bring about the destruction of these less viable, less resisting cells, we shall assuredly place the organism in a condition to reproduce fresh cells, more efficient for their task of protecting it against infections and intoxications of all kinds. This renewal of cellular elements may be easily—I will not say agreeably—brought about by abstinence from food sufficiently prolonged, and if necessary repeated—an abstinence which compels the organism to live upon its reserves.

It was to this method, in default of others likely to be more efficacious or more rapid in action, that I determined to have recourse, leaving it to actual experience to teach me whether, in carrying out a destruction of cells, I might not be eliminating the more vital, the more noble, perhaps the more resistant, instead of the older and the more damaged, elements. The first trial, which lasted three days, was sufficient to show that the organism was all the better for this cellular "spring

cleaning," having obviously succeeded in selecting the dangerous or less useful elements for expulsion and in retaining the better. The marked and lasting improvement which was noticed in the general condition was a sufficiently striking proof of this.

One stumbling-block, however, presents itself to those who, less determined than I, might wish to repeat this somewhat trying experience. It is, of course, well known that prolonged abstinence from food produces certain uncomfortable manifestations, of which the most painful are headache and general sense of depression and weakness. Convinced of the correctness of my theory, I was determined to carry out my experiment, whatever the inconveniences. To gain my end more quickly, however, to hasten the desired elimination of effete matters, it occurred to me that I might call to my aid a vigorous purgation. I did so, and had no reason to regret it, for I found, to my delight,

that the headache and other painful accompaniments of privation disappeared if the purgation was sufficiently thorough.

In this connection an extended experience has convinced me that saline purgatives are, in general, to be preferred. In cases of kidney trouble, however, it may be better to use castor oil or other preparations whose action is more local. Whatever be the purgative employed, it should be given in large dose. An incomplete purgation stirs up the intestinal contents without producing a rapid and complete evacuation. The patient is kept in a condition of malaise through the greater part of the day, and suffers from griping, headache, vertigo, or other reflex manifestations, due to the increased absorption of toxic matters through the walls of the intestines, on whose epithelial lining the purgative has had a partially denuding effect.

If, on the other hand, the purgative is abundant—a whole bottle of Hunyadi Janos water, for instance, or other similar water—

the desired effect of complete evacuation is brought about by two or three copious actions in the course of two or three hours, and in such a case the feeling of *bien-être* which follows is very different from the sensations experienced after a slight purgation. It would seem as if the alimentary canal acted with an almost conscious intelligence, using the exact quantity of the purgative necessary for its thorough cleansing and irrigation, and rejecting vigorously the excess, which might otherwise be harmful.

The phenomena of purgation in the animal organism are, in reality, closely analogous to those brought about by man by a "flushing" of sewers (*chasse d'égout*). If only a feeble current of water is used, one will succeed merely in spreading noxious effluvia by a stirring up of the fœtid contents of the sewers, and the desired cleansing and disinfection will not be brought about.

It is important to remember that in carrying out the treatment by elimination which

I have described, the desired result will be obtained more promptly and completely if a considerable quantity of a sufficiently dilute purgative be taken, and if it be swallowed with sufficient rapidity. Under these conditions the purge passes rapidly along the whole length of the digestive canal, carrying with it decomposed and decomposable matters, without giving up for endosmosis too large a dose of its active principle, which might excite thirst and irritate the renal epithelium. If, for instance, I take a whole bottle of Hunyadi Janos water, a prompt and complete evacuation takes place (about two hours), and I experience no sensation of thirst. If, on the other hand, as I have several times done, I take half a bottle of Rubinat or other similarly concentrated water, the effect is equally rapid, but the ensuing thirst is disagreeable and lasting.

During a cure I never interrupt my ordinary occupations. To this end I am obliged to take the purge only in the evening, on

my return from my work. The effect, however, is so prompt that I am never disturbed during the night, and the next day feel fitter than before to embark, in good time, on the laborious daily round of a medical practitioner.

I have said that if the action of the purgative be complete, one experiences no headache, nor any of the painful sensations which usually accompany and characterize hunger. My patients are always astonished to find that they do not suffer from hunger, and that this, while true of the first, is still more markedly so of the succeeding days of abstinence. The fact appears strange, and in contradiction alike with common experience and with scientific knowledge. Physiology, in fact, as usually taught, has always laid it down that hunger is the sum of the sensations which warn man and animals that it is necessary to repair the losses of the organism, and which urge them to introduce into the alimentary canal materials necessary

for such reparation. If this definition were correct, hunger should be increased after a purgation which has removed the whole contents of the stomach and intestines. But the fact is exactly the opposite, and the absence of hunger is, as I have said, still more marked on the succeeding days than on the first day of the purgation. It seems, then, logical to conclude that the phenomena which constitute hunger, disappearing as they do after purgation, must be due to matters which the purge has eliminated—that hunger, in fact, is the cry of an organism incommoded by toxic matters, whose seat is in the alimentary canal, and not the expression of the organism's need for a repair of its losses.

To this interpretation of hunger the ready objection will probably be made that it is proved to be erroneous by the fact, known, of course, to all, that the sensation of hunger leaves us directly after the ingestion of food. I regard this fact, on the contrary, as fur-

nishing a further proof of the correctness of my theory. In all probability what happens is as follows: When one is hungry the digestive system is suffering from the presence of effete matters, more or less toxic, but, in moderate quantity, compatible with normal function. The first effect of the food arriving in the digestive canal is to absorb and neutralize the products of abnormal fermentation, and thus to prepare the mass for evacuation. Up to this point food acts in the same direction, towards the same end, so to speak, as the purge, but in a manner entirely agreeable to the individual. It disintoxicates the gastro-intestinal canal sufficiently to permit the digestive juices to help, by their solvent action upon the ingesta, towards the due performance of the latter's second rôle — viz., the furnishing to the tissues of elements reparatory of the losses due to cell destruction. Food, then, fulfils two functions, distinct and successive: the first and most necessary, the absorption of

the excess of toxins in the digestive canal, and the aiding in its removal from the organism. Hunger is extinguished as this function is duly performed. The second function, less urgent, but not less useful, which has up to the present been regarded as the only one, is the furnishing of elements for the repair and renewal of tissue. This conception of a double function of food helps us to understand the great power the organism possesses of resisting the loss of its more indispensable vital elements,* while vitality is very quickly and gravely lowered by intoxications. Hence the greater and primary importance of disintoxication as compared with the real, but less urgent, need of providing for the renewal of effete elements.

* In cases of death by inanition the different organs and tissues are found to have lost substance in very different proportions. According to the figures given by Yeo, fat loses 97 per cent. of its weight, the spleen 63 per cent., the liver 56 per cent., the muscles 30 per cent., the blood 17 per cent., whereas the loss of the central nervous system is nil.

There is, then, at least a temporary equivalence between the action of the purge and that of food. With both the primary rôle is one of defence of the organism; both, within certain limits, counteract a commencing intoxication, and—apparent paradox—under certain circumstances the one is an efficient substitute for the other.

When, for instance, abstinence from food produces morbid phenomena by encouraging stagnation and fermentation of the intestinal contents, purgation is eminently indicated as the appropriate means of warding off the resultant dangers.

Guided by the principles laid down in the foregoing, which I have found quite regularly confirmed by the facts of practical experience, I have worked out a certain routine which I think is the most appropriate to follow in this "cure by renovation." After a general examination of the patient, I note the weight and the blood-pressure, determine the number and hæmoglobin content

of the red blood-corpuscles, analyze the urine, and occasionally perform a bacteriological examination of the fæces. Having thus determined the condition of the patient before the commencement of the treatment, I instruct him—

1. To take each day for two, three, or four days, a bottle of Hunyadi Janos water, preferably warmed, or from $1\frac{1}{4}$ to $1\frac{3}{4}$ ounces of castor oil, followed by about a pint and a half of water.

2. To abstain during this time from all food.

3. To drink as freely as desired of water, weak tea without milk, toast and water, fruit infusion, etc. Up to the present I have avoided any drug treatment whatever, as I wished to eliminate as far as possible all sources of dispute as to the therapeutic value of the treatment.

It is but rarely that one finds patients have any difficulty in carrying out the treatment for a period of three days, or even

longer, especially if the purge, and any other fluids that may be taken during the time, are taken warm. The results are almost always extremely satisfactory. It is rarely that the treatment fails to produce marked amelioration in the patient's condition, and I have never once observed any aggravation.

Of the results observed, some, such as loss of weight, lowering of arterial pressure, and lessening—nay, almost disappearance—of the bacterial flora of the intestine, are what one would naturally expect. A result, however, far less in accordance with *a priori* expectations is an increase in the number of red corpuscles during the first three or four days. There is an increase in the number of leucocytes also. The hæmoglobin content of the red corpuscles is increased, and, as regards the white corpuscles, one observes an increase, especially in the younger forms, the mononuclear, which are to be regarded as the most characteristic reparatory elements, while the

percentage of hæmoglobin is a measure of the intensity of cellular vitality.

Certain difficulties and certain slight inconveniences are met with in the application of the cure by renovation.

The first and the most important obstacle to be overcome in the endeavour to further the adoption of this treatment in current medical practice lies in the fact that it is in too marked opposition to the general habit of "living well," of *gourmandise*, and especially to the popular belief, encouraged by the medical profession, that there is great danger to health in failing to repair every day by a regular supply of food the losses of the organism—as if that organism could only live, so to speak, from hand to mouth! And yet numerous well-established facts, and especially the daily observed phenomena of serious acute disease, clearly demonstrate the erroneous nature of this belief, and prove, in the most conclusive manner, that Nature has accumulated in our tissues sufficient reserves

to provide for our continued existence over a period amounting to weeks.

Another obstacle to the application and to the sufficient prolongation of the treatment lies in the sensation of weakness of which some patients complain. This sensation, trifling in those who are in fair health, is more marked the more serious the state of ill-health for which one is applying the treatment. During the period of abstinence, or, in many cases, on the first day of abstinence only, one may experience a slight malaise, somewhat like that which precedes sea-sickness. The sensation is, however, much less unpleasant and much less persistent than that experienced on a voyage of any duration.

It is a curious fact that the first day of abstinence is, as a rule, the most unpleasant. There is generally some slight disinclination for muscular exertion, often a little somnolence. There is increased sensibility to cold, and, if the action of the purge is not prompt

and thorough, there may be some headache or pain in the back.

The cure is practically never associated with any inconveniences more serious than those enumerated.

Let us now pass to a consideration of the advantages to be derived from the "cure by privation" (abstinence and purgation).

1. Entire disappearance of any painful or uncomfortable sensation of hunger.

2. Extraordinary diminution in the number of bacteria present in the intestines, and thus an ideal disinfection of the digestive canal.

3. Marked diminution of thirst. One would naturally expect, *a priori*, that abstinence from food, accompanied by free purgation, would cause an increased desire for fluids. The contrary is the case, however. The amount of fluid called for is only about one-half of the quantity the individual is accustomed to consume when on his ordinary diet, provided always that the purgative employed is sufficiently dilute. The probable

explanation of this apparent contradiction is as follows: The liquids we drink, the desire or need for which constitutes thirst, are called for because they encourage the process of osmosis, by means of which the organism eliminates its toxic products. We know that a great many of these poisonous matters are produced by intestinal fermentation. As, then, by abstinence from food, accompanied by repeated purgation, we suppress this source of toxins, it is but natural that the need for liquids to aid elimination should diminish proportionally. This view of the matter is supported by the observed facts—among others, by the great diminution in the amount of urine passed, the urine representing one of the alternative vehicles for the elimination of the toxic products of combustion and cellular decomposition.

4. Suppression or marked diminution of perspiration even in hot summer weather. In this connection I may cite the following:

In the summer of last year, having to

travel from Tangier to Paris, I determined to abstain completely from food throughout the journey. With this end in view, I made my last meal before the fast on Thursday evening, June 27, 1907, and did not eat again until midday on Tuesday, July 2 (112 hours). During this period I took two purges, the first at Tangier on the Thursday night (I left Tangier at noon on the Friday), and the second on Saturday evening at Madrid. I drank in all four cups of tea, four lemon squashes, two cups of coffee and a glass of water. It should be borne in mind that I had to traverse Spain from south to north, to cross its sun-scorched, treeless expanses in the height of summer. During the whole journey I experienced but a trifling degree of thirst, nor did I suffer at all from heat, perspiration, or hunger. I arrived in Paris feeling so well that immediately after taking a bath I busied myself with the duties of my practice, and did not break my fast until noon.

The effect of the cure by privation in checking perspiration is also strikingly shown in Cases 2, 3, 4, and 6.

5. Sleep regular, somewhat shortened in duration, but very refreshing. The subject wakes to full mental activity without any intervening period of drowsiness.

6. Steadying of the pulse and lowering of blood-pressure, with increase in the percentage of hæmoglobin and in the number both of red corpuscles and of leucocytes—in other words, more perfect hæmatosis and phagocytosis.

7. A reduction in the volume of the principal viscera, especially the heart and the liver, with greater freedom and ease in expanding the lungs.

8. Steady loss of weight, at the rate of about 2 pounds a day. With this loss of weight there is associated a freer and less embarrassed action of the heart and other organs.

9. Disappearance of joint pains, muscular

rheumatism, and of the feeling of disinclination for exertion, their place being taken by a sensation of suppleness and well-being.

As is plain from the foregoing, the advantages of this therapeutic method are incomparably more weighty than its trifling inconveniences. From the point of view of utility and general applicability in the struggle against disease, and for the rehabilitation of health, the only factor in the least comparable to it is rest, which is, of course, an element of capital importance in almost all medical treatment. It is, however, of much wider efficacy than rest, and incomparably more rapid in its effects.

From the above, certain deductions may be made as to the diseases in which the method is likely to prove specially applicable.

In the first place, it is indicated, either primarily or as a supplementary therapeutic measure, in the whole group of "maladies of retarded nutrition" of Bouchard. We have seen that one of the most constant effects of

the treatment is to render the limbs more supple and their movements freer and more energetic. Rheumatism and gout, then, ought to be first among maladies to acknowledge the power of the treatment, and with them we would include diabetes, albuminuria, especially of cardiac or hepatic origin, and all congestive states of gouty character. I append some histories of cases of this class in which the treatment was applied.

Case 1.—About twelve years ago a patient of mine who was suffering from diabetes (100 grammes of sugar per diem), and in whose case I had applied Bouchardat's treatment without success, asked me if it was possible for him, in spite of his diabetes, to insure his life. I of course told him that it was quite out of the question. I had, however, at that time already carried out several times for myself the treatment by abstinence and purgation, and was beginning to form definite ideas as to the scope of the method. On thinking over my patient's question, therefore, it occurred to me that the treatment which I was, as a matter of fact, prac-

tising on myself at the moment should prove useful in the treatment of diabetes. I therefore suggested to my patient that he should give the method a trial. He consented, though not without reluctance, to do so, and carried out the treatment conscientiously. The result was startling; on the evening of the second day the urine no longer reduced Fehling's solution, and on the third he presented himself for life assurance examination, and no obstacle to his acceptance could be found.

Case 2.—M. B., aged forty, tailor by occupation. Under treatment by me for four years for diabetes. The patient was a very hard worker, and took no proper care of himself. There was a daily excretion of sugar of 100 grammes, and the patient was bloated in appearance and suffered from muscular weakness, shortness of breath, and copious and obstinate night sweats. (The body linen had to be changed several times each night.) A very troublesome cough had come on recently, and caused him to fear the supervention of tuberculosis. Examination of the chest revealed a general broncho-pulmonary congestion, and

the urine (specific gravity 1026) was found to contain 60 grammes of sugar in 2 litres. I prescribed complete abstinence from food for a period of three days, a bottle of warmed Hunyadi Janos water to be taken each day. Weak tea, water, or other simple drink, to be taken as desired. The result was so satisfactory that after an intervening period of three days of very light feeding the patient repeated the cure. At the end of the second "cure"—that is to say, less than ten days from the commencement of the treatment, ten days passed, not in bed but at work—abnormal physical signs were no longer to be detected in the lungs, cough and perspirations had ceased, the urine was free from sugar, and the patient's power of work had returned in full measure. I have advised him to repeat the cure now and again, with a view to insuring the complete re-establishment of his health.

Case 3.—Comtesse T. This patient was under my care twelve years ago, suffering from diabetes. Under Donkin's treatment (exclusive milk diet), which she carried out scrupulously, she entirely recovered from her

glycosuria, and remained cured for some years. Some time back, as the result partly of errors in diet, partly of great anxiety and worry, she became greatly debilitated, and the diabetes returned, the patient continually passing the tongue over the dry, bright red lips. She suffered also from copious perspirations, and her vision rapidly deteriorated. In addition to all these troubles, a sciatica supervened, which for weeks rendered life almost unbearable for her.

After examining the urine and finding that the patient was passing about 250 grammes of sugar per diem, I advised the resumption of the milk diet which had answered so well before. It, however, produced only a very slight improvement in the glycosuria, and had no effect on the sciatica. It was under these circumstances that I determined to submit the patient to the "cure by privation," in spite of her seventy years.

The patient carried out the treatment scrupulously. At the end of the first period of abstinence from food, which lasted four days, the sugar had entirely disappeared, the lips had again become moist, the sciatica had

almost left her, and the movements of the limbs had become much freer. There was, however, a marked sensation of weakness. I allowed her a light mixed diet. The following day she felt less weak, but three days after the resumption of food I found a considerable quantity (about 100 grammes per diem) of sugar in the urine. I strongly advised my patient to repeat the cure. As before, it was completely successful. The patient, on resuming food, was content to limit herself to an exclusively milk diet (about 2 pints a day) for some days, and to undergo a third period of abstinence. The sugar did not reappear. After an interval the treatment was gone through a fourth time, and the patient then put on a careful but varied diet. The patient's health was now solidly re-established. A remarkable feature was that not only did the perspirations disappear entirely, and the limbs become very much more supple, but the condition of the eyes showed a great improvement—an improvement which was of immense consequence to my patient, a woman of literary and intellectual tastes and a great reader.

Case 4.—M. P., aged sixty-eight, came to me about a month ago in a deplorable condition. He had great difficulty in getting to my consulting-room. A suffocating cough, with cyanosis and a bloated condition of the face, made me suspect advanced tuberculosis, the more readily that his wife had died of phthisis a year previously, and that he himself was a diabetic of some standing. An examination of the chest revealed a generalized congestion of both lungs, with râles of every kind, of whose nature it was impossible to be certain. The tongue and lips were very dry, and, in addition to the cough, the patient complained of intolerable headaches, which for a fortnight had prevented his getting any restful sleep, though he was continually drowsy. He suffered also from an unappeasable thirst. I directed him to go home at once, to keep his room for three days, abstaining entirely from food during that time, and taking each day a bottle of warmed Hunyadi Janos water.

An analysis of the sputa was reassuring on the question of tuberculosis. The urine, on the other hand, was found to contain 78 grammes of sugar per litre. Four litres

of urine were passed per diem, so that the daily excretion of sugar amounted to over 300 grammes.

I saw the patient again four days later. The cough had disappeared; there were no longer any râles; apart from slight breathlessness on going upstairs, the breathing was unembarrassed, and the pulse was quite regular. The expression of the face was almost normal—that is to say, the bloated appearance, the cyanosis, and the look of distress, had almost disappeared. The only disquieting feature remaining obvious was the dry red tongue. An analysis of the urine revealed 26 grammes of sugar to the litre, which, with a daily excretion of 2 litres only, gave a total of 52 grammes of sugar per diem, instead of the 300 grammes found four days before. He complained, however, of great weakness. Having reassured him on this point, I allowed him to take a milk diet, with water, fruit drinks, etc., as desired. The patient, however, being very thirsty, drank about 6 or 7 litres daily for four days, with the natural result that the glycosuria returned in marked degree. I found it necessary to

repeat the cure several times, and to limit the diet strictly during the intervals between the cures. One witnessed now a veritable resurrection. The livid, œdematous face became firm and ruddy, the look of suffering and strain gave place to a clear eye and a smiling expression, the breathing became normal, and auscultation revealed no abnormal sounds. The movements of the limbs became free, and no longer caused breathlessness.

I saw this patient two days ago. He had again exceeded the diet I had laid down for him. The urine, however, contained only 12 grammes of sugar per litre, and the general condition was in every way excellent.

Case 5.—Madame S. This patient has suffered from diabetes, with symptomatic amblyopia, for a good many years. She came to see me a few months ago. An analysis she had had made just before I saw her showed 45 grammes of sugar per litre in the urine. An excessively disquieting feature, however, was the condition of the left foot. The third and fourth toes had each, at its extremity, a blackened slough about the size

of a half-franc piece. The whole metatarso-phalangeal region was livid and insensible to even deep punctures. There was, in fact, diabetic gangrene. The condition being so serious, I urged the patient to submit herself at once to a thorough disintoxication of the organism by abstinence and purgation. She consented, and carried out the treatment thoroughly. Four days afterwards the husband came to report to me his wife's condition. He stated that she felt very much better. A more tangible fact, however, was that the urine, of which he brought me a specimen, showed no trace of sugar. This result was brought about in less than four days. I saw the patient again eight days after the first consultation. The purple coloration of the left foot had given place to a more natural colour, but the insensibility was unchanged. The general condition was excellent. I made the patient repeat the cure three times. After the second, sensibility returned in almost normal degree to the metatarsal region and to the toes which had been attacked by gangrene. The sloughs were very clearly circumscribed, and would evidently soon be

thrown off. The sight showed considerable improvement.

I saw the patient again two days ago. The slough on the third toe had separated, leaving only that on the fourth. Sensibility had returned all over the foot, though still a little diminished in the region of the first metatarsal and the great toe. The patient, feeling extremely well, had permitted herself some departure from the prescribed diet, with the result that a small quantity of sugar had reappeared. She promised to be more strict with herself in future.

Case 6.—Madame W. This patient has suffered for some years from attacks of "winter cough," which have come on regularly with the disappearance of the summer. The cough has been very violent, and the dyspnœa has prevented the patient lying down in bed. In addition, she has suffered from copious cold sweats, which have necessitated a frequent change of night-dress. No albumin or sugar in the urine. Rise of temperature is only occasionally to be noted. When she is at her best, one recognizes a condition of emphysema at both apices. During the

prolonged crises there is general pulmonary congestion.

Two months ago, during a very severe and obstinate attack, I decided to advise the cure by abstinence. Improvement manifested itself at once. The perspirations ceased, the cough was very much diminished, and the dyspnœa entirely disappeared. I advised a repetition of the cure several times at gradually lengthening intervals. Madame W. is now able to devote herself to her business, and is in better health than she has been for many years.

Case 7.—Madame M. began to suffer last year from severe uterine hæmorrhage, due to a fibroid tumour, from an exceedingly painful and obstinate sciatica, and from copious and persistent perspiration. The hæmorrhage and the sciatica yielded to electrical treatment (Apostoli's method). In spite, however, of careful dieting, the perspirations persisted, and the patient did not regain normal health and strength.

After a time the sweats became much more profuse, with corresponding increase of debility. Thinking the treatment by absti-

nence might be useful, I advised my patient to carry it out. She did so, but from the first treatment gained very little relief. A second, however, brought about what seemed to her an almost incredible improvement. She felt, she told me, that she had regained her youth. The perspirations had ceased, and she was able to mount and descend stairs with an ease entirely unknown to her before the cure.

Case 8.—M. L., aged forty. This patient had been for some years obese and short-winded. He had suffered from frequent attacks of influenza, complicated by pulmonary congestion and rheumatism. Two months ago he began to suffer from a violent cough, profuse cold sweats broke out on the least exertion, and he felt extremely ill. Auscultation revealed râles all over both lungs. No fever. I submitted the patient to the cure several times, at intervals, with the result that he lost 16 pounds in forty days. From the end of the first period of abstinence (three days) he felt wonderfully better; no breathlessness, no sweats, movements free and supple. The improvement has continued steadily since then.

Case 9.—Madame D., aged forty-nine. Menopause at age of forty-four, at which period she suffered greatly from severe headaches, vertigo, diarrhœa, and cerebral fatigue. She was obliged to keep her bed for a month owing to these troubles, which, however, disappeared almost completely, simultaneously with a pronounced embonpoint, about a year later. For the past three years she has suffered from distressing noises in the head, resembling the striking of a clock, from slow and difficult digestion, with flatulent distension of the stomach, from persistent cough and breathlessness, especially in the evening, and from a chronic eczema. Very soon fatigued ; great difficulty in reading.

I saw the patient for the first time on December 11. In addition to the symptoms above detailed, I found the face slightly congested and râles widely distributed over both lungs. Urine: Specific gravity 1028, albumin 0·12, loaded with urates. I submitted the patient to the treatment by abstinence. The cure was repeated four times between December 11 and January 19. Thirteen purges were taken, and the patient was without food for

fourteen days in all. At the end of the first period the cough and breathlessness had disappeared. On January 19 the headaches, noises in the head, and eczema, had all gone, the urine was free from albumin, and the patient no longer complained of ocular fatigue. She was able to live and enjoy her ordinary life, and considered herself cured.

Case 10.—M. de W., one of our most popular men of letters, has suffered for a long time past from severe and prolonged attacks of dyspnœa, which for weeks together make his life a misery to him, especially at night. He had been in this condition for a period of three weeks, and there seemed to be no likelihood of improvement, when he came under my care. As I had noticed in several cases the peculiar efficacy of the disintoxication treatment in congestive affections of the respiratory system, I urged the treatment upon him, assuring him with absolute conviction that his pains and discomforts would all take their departure on the first or second day of treatment. He preferred to wait, rebelling, like a true gourmet, from a treatment involving complete abstinence from

food for three days, and fearing the weakness he felt certain it would cause. The dyspnœa increasing, however, in spite of all ordinary treatment, he at last decided to follow my advice. The pulmonary congestion and dyspnœa showed marked improvement at once, so much so that after an interval of three days the patient repeated the cure.

I warned him that he must not stop at this point if he wished for a permanent cure, but must repeat the cure from time to time, until he had lost at least 12 or 14 pounds in weight. He did not listen to my advice, however, and I have heard quite recently that there has been a slight return of the dyspnœa.

This and the preceding case, with many others, show what difficulties one has to contend with in the introduction of this treatment into one's medical practice, even when one is dealing with patients of high intelligence. Habit, carelessness, and preconceived opinions of all sorts, so dominate the human mind as to prevent in too many cases the timely adoption of means efficacious, not only

in the treatment of disease, but still more for the preservation of health and the prolongation of life.

All maladies due to intestinal infections will prove amenable to this disintoxication treatment. Since I have adopted it I have never met with a case of diarrhœa or of vomiting which has proved refractory, except where those affections have been symptomatic of grave organic disease, such as tumours, tuberculosis, cerebral lesions, etc. For a considerable time past I have used no other means in the treatment of these intestinal intoxications. I employ it even as a method of diagnosis.

The following are illustrative cases:

Case 11.—Madame de L., a very intelligent woman, has suffered for some years from a gastro-enteritis of muco-membranous type, complicated by neurasthenic symptoms. A few months ago, when I spoke to this lady of the trials I had made of the treatment by abstinence and purgation, especially on myself,

and expressed my firm conviction that she would derive great benefit from a thorough disintoxication of the organism and disinfection of the intestinal canal, she expressed her readiness to undergo the treatment. The result far surpassed her expectations. A few days ago she wrote to me as follows :

" I do not know how to thank you enough for advising me to undergo your cure. The results have been indeed remarkable. No more internal pains, no more sensation of burning. I digest everything. My heart also has shared in the improvement. It has never given me so little trouble. What a pleasure to feel young, to have a clear head and a good colour ! . . . I shall put myself through another three days' treatment before leaving for the Riviera."

Case 12.—M. K. This patient has been under my care for the past six years. When I first saw him he was suffering from diarrhœa and jaundice, the superficial abdominal veins were dilated, and there were present some ascites and some œdema of the lower extremities. Palpation and percussion revealed an enlarged liver. I may

mention that the patient, a traveller for a wine firm, was a heavy drinker. In view of the gravity of his condition, which I did not conceal from him, he submitted for a long period to a rigid milk diet. Little by little he improved, regaining at last a condition of middling health, in which he suffered from frequent attacks of dyspepsia, provoked, almost invariably, by departures from the régime laid down for him. Latterly his condition began to grow worse. He lost flesh and became dropsical. Attacks of giddiness, gastralgia, nausea and diarrhœa, became frequent, with œdema of the extremities.

It was under these circumstances that, instead of putting him again on a milk diet, which might have given good results in time, I decided to apply the cure by rapid disintoxication. At the end of the first period almost all his troubles disappeared. I then kept him for four days on a daily diet of a litre and a half of skimmed milk, advising him to repeat the cure several times and to adhere to an abstemious lacto-vegetarian diet in the intervals. To-day, after three weeks of treatment, he is making the best possible

progress, in spite of the unfavourable condition of his organs of nutrition.

Case 13.—M. M. This patient suffered from constant pains in the shoulders and across the loins, so severe that he always walked almost bent double. At times the pain seemed to affect every part of the body. I have seen him quite unable to get into his bed, so that it was necessary to lift him into it, and with the greatest care. An insatiable worker, he would have himself dressed even when suffering in this manner, and leave home to perform punctually his duties as manager of a large business concern. Like the last patient, he suffered from ascites, œdema, diarrhœa, and dilatation of the veins of the abdominal walls, and occasionally from disquieting attacks of broncho-pulmonary congestion. It was only during the worst of his crises that he could be persuaded to keep his bed. Under a rigid and prolonged lactic régime he had gradually got back to a moderate condition of health, in which he was able to go on with his work.

Last summer he did not derive his usual benefit from his season at Bourboule. His

pains increased, and he gradually fell back into much the same condition he had been in some years before. Instead of prescribing a long period of rest and a return to milk diet, I ordered an abstinence cure, feeling sure that it would re-establish my patient's health more rapidly and with less hardship. Such proved to be the case. Without a day's cessation from work, and without giving up his evening social engagements, he made a rapid recovery, and was soon able to mount with ease to his flat on the fifth floor, whereas formerly he had been obliged to rest at each landing, and, in a painfully breathless condition, to cling to the banisters, helping himself up step by step.

It is probable that the treatment will be found useful in dealing with inflammatory affections of the eye with increased intra-ocular tension. In this connection I may cite my own case, which is not without interest.

Case 14.—Four years ago I was much concerned to find that I was unable to read for more than about ten minutes at a time, in

spite of the fact that I was using glasses which had been prescribed for the correction of my hypermetropia. I need hardly say how much I suffered under this disability. I consulted my specialist colleagues, who made heroic efforts to cure my trouble by appropriate glasses, corrective of my error of refraction. Nothing succeeded, however, and I remained unable to engage in any sustained reading, or, indeed, close eye-work of any kind. I should add that, as the result of frequent serious and obstinate attacks of influenza, my capacity for work generally had for some twelve years been very seriously diminished. An atrophy of will-power, which I found myself unable to combat, deprived me of all energy save when some imperative obligation drove me to immediate action. I suffered from photophobia. In writing, I found the ordering of my thoughts and the combining words for their expression most difficult, and the thought of the constant revision of proofs which this involved was a veritable obsession. This deplorable condition prevented me for a long period from taking active part in the discussions at our medical

societies. The feeling that I must say good-bye to any hopes of doing work for the advancement of our science, a hope that had always been my dearest aspiration, was a great grief to me. This year, having determined to pursue further my experiments on the renewal of the tissues with a view to communicating the principal results arrived at, I underwent the cure by abstinence and purgation three times within the space of a little more than a month. My weight came down from 80 to 70 kilos. The resulting improvement in my health was amazing, and it was accompanied by an indescribable feeling of well-being and of happiness in my improved condition. All my troubles departed as soon as my weight came down to the point at which it had stood during my most active years.

I can now work with ease and satisfaction until a late hour every night without my work being interrupted by any pain or discomfort in my eyes. I feel fifteen years younger.

In completion of these notes of my own case, I may say that a sequel to my repeated attacks of influenza had been an increase of weight of about 12 kilos, and that, beyond a

certain phosphaturia, repeated examination of the urine never revealed anything abnormal.

Bearing in mind the ocular symptoms present in my own case, those detailed in Cases 3 and 9, and those present in a case I have under treatment at present, I should not be at all surprised if the abstinence treatment, rigidly carried out and repeated as might seem necessary, should give happy results in congestive conditions of the eye, even in glaucoma, especially in its early stages. Perhaps my ophthalmologist colleagues will put the matter to the test; the treatment can do no harm—nay, is almost certain to do some good—even if it does not result in a radical cure.

Case 15.—This case also is of some interest from an ophthalmological point of view. Quite recently I was visiting, not professionally, a friend of mine who had just undergone an operation for cataract. During the first day after the operation everything went well. The next day, however, I was astonished to find the patient sitting up in bed and engaged

in the consumption of a very substantial repast. I mildly suggested that it was perhaps not very wise to be indulging so soon in the pleasures of the table. My friend, however, being an obstinate, impulsive man, and, though quite intelligent, full of the most astonishing views and prejudices, after replying that he felt very weak, that he knew his own constitution, and was sure that he needed food, went on with his meal. As he spoke rather curtly and with an air of superior knowledge, and as I had no responsibility for the management of the case, I said no more, and soon took my leave. The next day, meeting at the house the surgeon who had operated, I learnt from him that the patient had passed a terrible night, that he had been delirious most of the time, and that in his delirium he had torn off all the dressings. My confrère, to whom I expressed the opinion that this untoward happening was probably due to the patient's dietary imprudence of the day before, replied in the most positive and decided manner that it was due, on the contrary, entirely to the operation itself; that these contretemps were well known to

ophthalmologists, who recognized this special form of delirium as depending directly on the operation for cataract. This explanation, which was, of course, no explanation at all, silenced but did not convince me, and I remained more than ever convinced that this condition, spoken of as a complication dependent directly on the operation, was, in reality, merely an evidence of the action on the nervous system of an intoxication of intestinal origin. It is a condition that can be and should be avoided. As my friend is about to undergo before long an operation on the other eye, I should have no hesitation in predicting that the "post-operative delirium" will not repeat itself if the patient will submit to the treatment by abstinence.

Case 16.—A lady who suffered a great deal from eczema had had for many years a double dry otitis, with some deafness. One of our most distinguished aurists decided to attempt the mobilisation of the ossicles. After the first operation an acute attack of eczema involved the whole ear and rendered the operation entirely nugatory. In view of this unhappy result, I advised my patient to

undergo the cure by abstinence during the three days immediately preceding the next operative intervention. She did so. On this occasion no complication supervened. I may add that since the patient has practised the abstinence cure at intervals her eczema has practically disappeared.

Case 17.—Madame J. A short time ago this patient was very severely burnt in a gas explosion. Both forearms were involved, as also the whole of the face, the ears, and the antero-inferior portion of the scalp. On the day following the accident the face and eyelids were so much swollen that the eyes were hidden, and it was difficult to make out whether or no they had escaped injury. The right side of the face, the right ear, and the lips, were covered with superficial ulcers. There was an enormous swelling below the jaw on the right side. The patient had for three years suffered from hepatic trouble. For a period of some months before her accident she had had a persistent jaundice (dependent on the presence of gall-stones), which had given her medical advisers much anxiety, as it had not yielded to strict

hygienic measures, and the patient refused operation. In addition, my patient had suffered from an inveterate eczema and from rheumatism. I mention these pathological details in order to make clear how legitimate was our anxiety concerning the results of so extensive a burn in a subject markedly predisposed to cutaneous and gastro-hepatic complications.

The only local treatment I adopted was a daily dressing with carron oil. With this, however, I combined a rigid abstinence cure. For the first four days (Monday to Thursday) I administered a whole bottle of Hunyadi water daily. No food was taken during the first three days, and on the fourth only a litre of skimmed milk. At the end of the fourth day the patient felt so much encouraged by the progress made that of her own accord she resumed the cure two days longer (Friday and Saturday).

On the Monday following, the patient was able to resume her ordinary occupation. In one week, therefore, in spite of the patient's predisposition to serious complications, this extensive burn had healed without causing a moment's anxiety.

Case 18.—Madame S., aged sixty-three. This patient, a powerfully-built woman, weighing about 200 pounds, suffered for about three years from persistent and copious uterine hæmorrhage. Some time since she consulted a specialist at one of the hospitals, who, she said, removed a small portion of the cervix uteri, with a view to a microscopical examination. Fearing that he would propose an operation, she had not returned to the hospital, and had remained for some months without treatment.

When she came to me six weeks ago, she presented numerous small patches of eczema on the face and arms. The uterus could not be mapped out owing to the obesity of the patient. The cervix was large and hard, and at its left border presented a bleeding, suppurating notch (? a syphilitic or cancerous ulceration, or merely the wound caused by the surgeon's ablation for diagnostic purposes). The discharge had not the odour characteristic of cancer of the cervix, nor were any enlarged glands discoverable. I remained, therefore, in considerable doubt as to the nature of the wound and the real cause of the metror-

rhagia. As the patient, dreading an operation, refused absolutely to see the surgeon again, I suggested to her the cure by abstinence and purgation. She agreed to carry it out, though sceptical as to the result. At the end of a four days' cure she came to see me, and reported with great satisfaction that the hæmorrhage had very greatly diminished, that the general condition was immensely improved, and that the movements of her limbs were much freer. She expressed much astonishment at the fact that she had been able to go for such a long time without food without experiencing the slightest sensation of hunger. The condition of the cervix remained much as before, save that there was a little less hardness. The fundus uteri could still not be felt. I allowed the patient from a litre to a litre and a half of milk daily for three days, after which the cure was to be repeated. This has been done, with intervals, four times in all. Improvement has been rapid and continuous. To-day, six weeks after her first visit to me, there is no hæmorrhage, the cervix has become soft, and the wound in it has almost healed. The eczema-

tous patches have all but disappeared, and the patient's general condition is excellent. She has decided, on my advice, to carry out the cure at weekly intervals until her weight is reduced to 180 pounds (it is at present 192). In view of the great general improvement, I look with confidence not only for a radical cure of the metrorrhagia, but also for a restoration to a higher level of health and activity than the patient has known for years.

Case 19.—Three months ago a patient of mine, M. P., was operated on in a nursing home for a papilloma of the bladder. The operation was performed by one of our most practised specialists in the surgery of the urinary organs, and was brilliantly successful. The patient recovered rapidly from the shock of the operation and from the effects of the anæsthetic. The temperature did not rise above 100·3° F., and the general condition was fairly good. The patient was allowed by the surgeon a substantial, though not excessive, diet, with a view to removing as quickly as possible the condition of weakness resulting from the three months' illness preceding the operation.

I visited my patient three times during his stay in the nursing home. In spite of the general satisfaction expressed with regard to his condition, I felt obliged to say that I did not altogether like the look of things, my reasons being that the patient had lost no flesh, that his temperature in the axilla remained at 99·5° to 101° F., and that there was a little pus in the urine.

After remaining very much in this condition for three weeks in the nursing home, my patient returned home, the surgeon regarding him as cured, and believing that country air would accelerate his convalescence.

Twelve days afterwards I received an urgent summons. I found the whole household in a state of consternation. The patient's temperature was 105° F., he was in great pain, the abdomen was distended, and he was retching continually. The turbid urine contained a considerable quantity of pus and of phosphates. I was in doubt whether I had to do with a surgical infection dependent on the operation, or with one of purely alimentary origin.

While waiting for the surgeon, who was to

come next day, I determined to act on the second hypothesis. I gave a large dose of a purgative, and enjoined complete abstention from food, in spite of the fears of the patient and his entourage, and their protestations as to his weakness, etc. The next day the temperature had dropped to 102·2°. The surgeon arrived, and approved my treatment, as he could find no surgical explanation of the great elevation of temperature. On this second day also, and on that following, I gave a large purgative dose (a bottle of Hunyadi Janos water).

During these three days the patient ate nothing, and drank only water and fruit infusion. The result was that forty-eight hours after the first purgation the temperature had fallen to 98·6° F., a figure it had not previously reached since the operation, and the amount of pus in the urine had begun notably to diminish. The patient lost a considerable amount of weight, and, as a consequence, made an uninterrupted progress to recovery. I repeated the cure four times, and made the patient resume gradually a moderate and carefully-chosen dietary.

The foregoing cases should, I think, encourage the application of the cure as a preparatory or complementary treatment in cases of operation. The lowering of blood-pressure, increased freedom of respiration, improved hæmatosis and phagocytosis, and the very marked and favourable modification of the intestinal bacterial flora, are conditions so obviously favourable to the success of operative procedures, that the cure deserves at least a trial by surgeons, both before and after operations. I cannot help thinking that infective complications of all kinds, pyrexias and ill-understood delirious conditions, would become more and more rare, and that convalescence would be more rapid and freer from risk of relapse.

What I have said of surgery is likely to apply equally in the domain of gynæcology and obstetrics, as appears from the following case.

Case 20.—Madame D. This patient, whose complexion is of a waxen pallor, has three

children living ; her confinements have always been easy, but in each case, both immediately after the confinement and also after an interval of some weeks, she has suffered from uterine hæmorrhage so violent that her life seemed in great and immediate danger.

Two years ago I had to treat the patient for one of these alarming attacks, which had come on with terrifying suddenness three weeks after confinement. This year, being again pregnant, and more anxious than ever as to the outcome, she asked me to attend her in her confinement, which turned out a somewhat long and troublesome affair, requiring the use of forceps. There was fairly abundant post-partum hæmorrhage, which made me somewhat anxious, as the patient, in spite of my advice, had not modified her diet during the later months of pregnancy.

Under these circumstances, after applying the usual treatment for the hæmorrhage and administering a dose of quinine hydrochlorate, with a view to maintaining uterine retraction, I gave, a few hours after the confinement, a purge, which was repeated also the following day. For two days the patient took no food

whatever. After this I kept her for some days on a very light diet, and gave two more purges. The patient nursed her baby without the slightest difficulty. Ten days after the confinement the lochia were no longer sanguinolent, and on the fifteenth day the patient left her bed, feeling stronger than she had ever done after a confinement, her condition in every way satisfactory.

The two following cases demonstrate the value of the treatment in anæmic conditions.

Case 21.—Madame P. has been anæmic from girlhood. A year ago she was confined of a daughter, whom she was unable to nurse herself, her milk being insufficient both quantitatively and qualitatively. Lately, feelings of extreme weakness, threatenings of syncope, and disorders of vision, have aggravated her condition.

On examining the blood, I found 2,500,000 red corpuscles, hæmoglobin 100 on Tallquist's scale, 4,000 white corpuscles, of which 69 per cent. were polynuclear, 25 per cent. mononuclear, and the rest doubtful.

After three days' abstinence treatment a

fresh examination gave the following results : Hæmoglobin 100, red corpuscles 4,000,000, white corpuscles 6,000—polynuclear 65 per cent., mononuclear 28 per cent. Three weeks from the commencement of treatment, at the end of a second cure, the figures were as follows : Hæmoglobin 100, red corpuscles 5,500,000, white corpuscles 5,500—polynuclear 60 per cent., mononuclear 31 per cent., doubtful 9 per cent. The sensations of weakness had disappeared, and the general condition was much improved.

Case 22.—Madame X. This patient has suffered for about a year from profound neurasthenia, with depression. Two periods of the abstinence cure were followed by some improvement, which encouraged hopes of a good result. A series of private griefs and troubles, however, came to render nugatory our efforts, and to cut short the patient's favourable progress.

Dr. Barlerin made an examination of this patient's blood for me before treatment, and after the second period of abstinence. The results are given below :

Hæmatological Elements.	October 22.	October 31.
Red corpuscles ...	4,760,000	5,600,000
Hæmoglobin	0·70	0·75
White corpuscles ...	5,820	7,100
Polynuclears	77·0 per cent.	58·0 per cent.
Eosinophiles	2·0 „	4·0 „
"Matzellen"	0·9 „	1·2 „
Lymphocytes	18·0 „	23·0 „
Large mononuclears ...	1·0 „	12·0 „

Another branch of medicine in which the cure by disintoxication will undoubtedly be found of great utility is dermatology, especially where we have to deal with congestive troubles or cutaneous manifestations of intestinal infections.

Cases 9, 16, 17, and 18, are in themselves abundant justification for the application of the method in dermatology. I give here notes of an encouraging case I have still under treatment.

Case 23.—Mademoiselle B., aged twenty-six, has suffered for some years past from a

copious eruption of acne, especially on the face, which is covered with livid acne spots, some nearly of the size of a large pea. The patient was employed in a baker's and confectioner's shop, and her employer dismissed her on account of the impression her unfortunate appearance made on his customers. The poor girl was in despair, especially as her trouble showed no sign of improvement, in spite of vigorous and varied treatment.

Under these circumstances I thought it would be worth while to submit the patient to the cure by disintoxication. At the end of the first period of the cure the skin was less red, there were no fresh spots developing, most of the old ones were fading, and many had disappeared.

Fifteen days later only a few spots were left. I have every hope, especially in view of the great improvement in the general condition, that the patient will soon be entirely freed from her trouble, which has been a veritable nightmare to her.

The changes in the condition of the blood brought about by the cure, as shown in Cases

20, 21, and 22, lead me to suppose that it may give good results in certain cases of mental disease, especially at the commencement, nor should I be surprised if it should prove a valuable auxiliary in the treatment of alcoholism, morphinomania, and other similar intoxications.

In this connection the following case is, I think, encouraging.

Case 24.—Madame T. I have known this patient for about twenty years. Her normal temperament is calm and equable, and she is devoted to business. She has two children, a son and a daughter, of whom the latter was married a few months ago. The grief caused by the separation had a profound effect upon the mother, who became melancholic, and wept almost unceasingly, persuaded that she could not survive her grief. This condition had lasted over a month when her husband brought her to me. A careful examination revealed no special physical cause for her unfortunate mental condition. I could detect nothing abnormal beyond a flabby, furred tongue and a slightly foul breath, pointing to a

loss of tone in the digestive organs. To overcome the feeling of weakness from which she was always suffering, and to combat an imagined " cerebral anæmia," she forced herself to eat, and to eat more than she had been accustomed to. After meals her face was always flushed, and she found herself unable to apply her thoughts to any kind of occupation.

I determined to submit the patient to the abstinence treatment, feeling sure that even if a complete cure were not brought about, the condition of the digestion would be much improved. As events turned out, the patient's melancholy had almost disappeared by the end of the first three days' period of abstinence, and the weeping had ceased entirely. A second period, undergone after a short interval, restored the patient to her normal health. I have advised the patient to live abstemiously, and to repeat the cure from time to time.

I do not pretend that this cure has been put as yet on a definite scientific basis. Much further and more generalized experience of it

is required before we can arrive at clear conclusions as to the extent of its sphere of usefulness. From the observations I have already made, however, of the action of the cure it is possible to draw certain inferences of capital importance.

1. There is absolutely no danger and no serious inconvenience in abstaining entirely from food for three or four days, or even longer; the period of abstinence, also, may be repeated several times without risk or inconvenience if each day a large dose of a purgative is given to insure intestinal disinfection.

2. While there may be some slight discomforts during the period of abstinence, these never persist after food is resumed. On the other hand, undoubted and durable benefits are always gained, in the shape of increased freedom of movement, greater clearness of ideas, amelioration of all congestive conditions, and a true feeling of general well-being. In a word, one is always better in all respects after the cure than before.

3. The cure is a perfectly safe procedure if controlled by examinations of the blood and the urine. It insures the maximum of benefit being derived from any concomitant therapeutic measures.

I would particularly insist on this third clause with a view of obviating what I conconsider to be the chief danger my method has to run, that of being used recklessly by persons with no scientific medical knowledge. It is possible that in certain cases a simple fast might be of great benefit, just as in many cases a little rest in bed is sufficient to bring about a cure. In order, however, to avoid dangerous misuse of the cure, and to secure that it be applied under the most suitable and favourable conditions, it is indispensable that the treatment shall be carried out and supervised by the physician, who alone is competent to estimate clearly the effects it is producing in any given case, and to aid or modify those effects by suitable therapeutic measures. Thus practised, the cure will, I

have no hesitation in affirming, give results that will astonish the most sceptical.

It goes without saying that the cure is not invariably and immediately successful. It would be childish to put forward any such pretension. Nor do I claim that one can by its means cure established organic lesions. If properly carried out, however, in suitable cases, one has the satisfaction of watching a steady improvement in the general condition, and, later, the complete and definite disappearance of morbid phenomena of a functional nature.

It may be objected to my method, and to the theoretical considerations on which I base it, that they are somewhat too crudely simplifying (*simpliste*). I am not greatly concerned to deny the charge, but would point out, on the other hand, that the method has results to show, and this is, after all, one important test of sound medicine, perhaps also of the truest science. The more I consider the question of the influence which this cure by

disintoxication is likely to exert on the course of diseases of various kinds, the wider seems to grow the field of its application, and the more extended our powers in the direction of warding off disease and preserving health.

Rapid Cure of a Grave Attack of Herpes Zoster, and, at the Same Time, of an Old-standing Bronchitis.

Case 25.—Madame R., aged fifty-eight. This patient has suffered from chronic bronchitis for a period of more than thirty years. About fifteen years ago she was free from the bronchitis for about three months, and, curiously enough, this disappearance of bronchitis coincided with an attack of appendicitis, for which the patient was not operated upon. Shortly after her recovery, however, and return to her ordinary manner of life, the bronchitis returned in full force—to such purpose, indeed, as to confine her to her rooms during several months of the year, and to cause frequent prolonged and severe attacks of dyspnœa.

As her sisters and a nephew, who had lived with her, had all died of tuberculosis, the patient herself, and those in attendance on her, believed that the affection from which she continued to suffer, in spite of much and varied treatment, was also tuberculous in character. Some years ago I saw the patient at my consulting-room, and found marked congestion at both apices and abundant moist sounds over the whole chest. This inclined me to accept the diagnosis of pulmonary tubercle, which, however, I had no opportunity to confirm by further examination, clinical or bacteriological.

I did not see the patient again for some years—until a short time ago, in fact, when I was summoned to her, as she was stated to be suffering from severe pain in the neck. I found the whole right side of the neck and the right shoulder covered by a copious eruption of small pearly vesicles on a very hyperæmic base. The eruption was accompanied by an intolerable burning pain. I have never in the course of my practice seen so extensive an eruption of herpes. It extended from the nape of the neck to the lobe of the right ear, and on to the cheek, and spread downwards

nearly to the middle of the back, involving the whole shoulder and upper thoracic region. There was high fever and a violent cough, which caused exacerbations of the pain and added double embarrassment to the breathing.

The case was urgent, and I advised the patient to adopt the cure by abstinence and purgation at once. It was carried out thoroughly, in spite of an exacerbation of the malady during the first twenty-four hours. Improvement was not long delayed. On the second day the burning began to diminish, and disappeared entirely on the third. The only local treatment consisted of applications of starch powder.

The eruption rapidly disappeared, leaving scabs, the last of which had become detached at the expiration of a fortnight. A gain from the treatment of still greater importance to the patient was that the cough which had afflicted her so obstinately for so many years also entirely disappeared. Examination of the chest revealed no trace of any lesion, either old or recent. Further, after one or two repetitions of the cure, the general condition

was so profoundly and favourably modified that her limbs became supple and her brain clear as in youth. The bronchitic manifestations have not returned.

To complete the history of the case, it may be stated that eight days before the appearance of the extensive eruption above described, a slight eruption (of about a dozen vesicles) appeared on the right wrist. This eruption disappeared spontaneously, to be succeeded, a few days later, by the acute attack I was called upon to treat.

A study of the history I have given in summary above suggests certain reflections which are not without interest.

Apart from the rather unusual fact of this vast zona on the neck, preceded eight days before by a small zona on the wrist, one cannot but be struck at the outset by the record of what happened to the patient fifteen years ago during the attack of appendicitis from which she then suffered. It will be remembered that the constant, distressing, and old-standing cough disappeared for a

period of more than three months, during which the patient was undergoing treatment, dietetic and otherwise, for her appendicitis.

Had the patient suffered from tuberculosis, it is hardly likely that the cough would have ceased completely or so suddenly. It must, then, have had another cause.

The cough and other broncho-pulmonary manifestations disappeared, *in just the same way*, after three days of fasting - purging treatment. From these two disappearances of cough, as the result in each case of a dietetic treatment, we are justified in concluding formally that the whole series of bronchial troubles, congestion, cough, and dyspnœa, were not of microbic orgin, but were due to alimentary intoxication.

This view furnishes a satisfactory explanation of the etiology, development, and cure of my patient's serious symptoms, and confirms the view I have long held, that hydroa febrilis, herpes preputialis, and herpes zoster, are essentially one and the same morbid pro-

cess, differing merely in degree and situation, and that they are always the expression of a nerve intoxication of alimentary origin.

From all this follows the conclusion in therapeutics that a rapid and thorough disintoxication of the organism is indicated, a method of treatment already habitually and successfully employed in hydroa and herpes preputialis.

The case establishes, also, the importance of the part played by alimentary intoxications in the causation of broncho-pulmonary disorders, especially of congestive and dyspnœic form—a point long ago insisted on by so eminent an authority as Dr. Huchard.

Some few days after reading before the *Société de Médecine* a communication on the cure of diabetes (*La Guérison du Diabète*), I met Dr. Coyon, of the Hôpital St. Antoine, and, the conversation turning on my views on diabetes, my confrère, while admitting that the cure by disintoxication possessed

some advantages, expressed serious doubts as to the results being always as satisfactory as I affirmed. I offered to prove to Dr. Coyon (an offer I had already made to my confrères of the *Société de Médecine*) the truth of my propositions, if he would furnish me with the opportunity. With a kindness and liberality for which I shall ever be grateful to him, he agreed to my proposal, and invited me to his wards in the Hôpital St. Antoine, where he had under his care at the moment a case of diabetes of exceptional gravity.

On attending the hospital next day in accordance with the invitation, Dr. Coyon presented to me a patient whose condition was as follows:

Case 26.—The patient was a man of sixty-five, whose father and mother had both died of diabetes, from which disease he had himself been suffering for some years. He was passing daily from 8 to 10 pints of urine containing about 7,500 grains of sugar and 70 grains of

albumin. Emaciation was extreme, and in addition there was inflammation of the right foot and knee, with enormous swelling, the knee being about twice its natural size.

There was total inability to use the right leg, the slightest movement causing acute pain. The condition resembled an advanced case of white swelling of the knee-joint, but it was impossible to make an exact diagnosis. Exploratory punctures had yielded nothing but a septic pus. The examination by the X rays, on the other hand, gave results which inclined one to a diagnosis of sarcoma. The patient had been in hospital several months, all sorts of treatment had been tried, without reducing the daily excretion of sugar below 3,000 grains, and his condition was becoming steadily worse.

To apply the treatment in such a case was to risk compromising it. Encouraged, however, by the constant and uniform results of an already long experience of the method, I did not hesitate to undertake the task, and to predict that within a fortnight I should have relieved the patient of his diabetes, and later,

perhaps, also of his tumour, supposing it not to be of a cancerous nature.

I ordered at first a copious saline purge to be taken daily for four days, during which time all food, both liquid and solid, was to be abstained from. Watery drinks were allowed *ad lib.* The result of the four days' cure was so satisfactory—the sugar had entirely disappeared from the urine—that the treatment was continued for another day. A remarkable fact, but one quite consonant with my general experience—one, indeed, almost always noted where the method of disintoxication is put into force—was that the patient felt less exhausted after his five days complete abstinence than he did before the commencement of the treatment. Dr. Coyon at this time objected quite pertinently that the sugar had disappeared because that was the natural result of depriving the organism of food for a prolonged period, and that it would certainly come back when feeding was recommenced. I agreed that the sugar would reappear, but stated that it would do so in much smaller percentage than before, that it would disappear more rapidly each time the cure was

applied, and would eventually disappear, and not return if a restricted vegetarian régime with short periods of abstinence-purgation treatment were adhered to. As a matter of fact, the sugar did reappear when food was resumed, to the extent of about 600 grains in $3\frac{1}{2}$ pints of urine daily. This was a great improvement on the 7,500 grains in $8\frac{3}{4}$ pints passed before treatment. The following diet was ordered: *Breakfast*, a cup of coffee and fruit; *dinner*, a vegetable julienne soup, some green vegetables, 1 ounce of bread, a large helping of salad, and some fruit; *supper*, julienne soup, green vegetables, an ounce of bread, and some fruit. Water or other simple drink as desired.

After four days of this régime the patient commenced a second cure as vigorous as the first. This time the sugar, instead of only disappearing on the fourth day, was absent at the end of the second. The patient, much encouraged, willingly continued his fast the full four days, in spite of the absence of sugar. The quantity of urine passed per diem diminished to $\frac{7}{8}$ pint, and at the end of the fast sugar and albumin were both absent; the general

condition showed steady improvement, and surprised both Dr. Coyon and his students. Their surprise was still greater when sugar failed to reappear on the patient taking food again. In spite of this great improvement, I subjected the patient, after an interval of five days, to a third period of abstinence and purgation, of the same duration and thoroughness as before, at the end of which I allowed a rather fuller diet, giving a thick soup and an extra $\frac{1}{3}$ ounce of bread at the midday and evening meals.

The patient's urine continued free from sugar, and the quantity passed daily remained at about $1\frac{3}{4}$ pints. The general condition improved steadily. The skin, which had been of an earthy yellow colour and resembled parchment, became supple in texture and acquired a natural pink colour; it was as if one saw life returning to the organism.

At the end of a month, however, the sugar reappeared, though in small quantity. I felt quite certain that the rules I had laid down as to diet were being secretly infringed, and, on inquiry, the patient, a man of an awkward temper, admitted that, having had a dispute

with the nurses, he had, to spite them, eaten freely of bread given him by other patients in the ward. A period of abstinence-purgation treatment soon put matters right, and favourable progress was again made.

At first the condition of the knee appeared to become worse under the treatment, and had it not been for the fear that the patient was not in a condition to stand the operation, amputation of the thigh would have been resorted to. At the end of a month, however, the swelling, as I had anticipated, began to diminish, and this diminution continued steadily, so that at my last visit the femoral part of the swelling had practically disappeared; only the tibial part remained, and that reduced by about two-thirds. If the patient continues the treatment and carries it out conscientiously, he will, I have no doubt, be able to leave the hospital completely cured in less than two months.

A further very suggestive detail in connection with this case is the following. During the second fast the patient contracted an infectious pneumonia from the patient in the

next bed, who had died of the malady two days before. In spite of this grave complication, which under ordinary circumstances one would have expected to be fatal, my patient made a good recovery in less than a week, and the favourable progress as regards the principal malady was not interrupted. This observation furnishes evident proof that the abstinence-purgation treatment, so far from weakening the individual or rendering him an easier prey to disease, strengthens him and increases his resisting power.

It is generally admitted that diabetes in young patients is an especially grave disease and intractable, and running, in most cases, a rapidly fatal course. The following case would encourage the hope that we may be able to give, in the future, a less gloomy prognosis in these cases.

Case 27.—The patient was a youth of sixteen, who had been for five months in the Hôpital Tenon, under Dr. Fleurand. He had passed at times as much as 24 pints of

urine daily, containing 18,000 grains of sugar. In spite of various treatments carried on at home or in hospital, the quantity of urine had not been reduced below $8\frac{3}{4}$ pints, containing 6,000 grains of sugar. The thirst from which the patient suffered was so intense that he would at times, to quench it momentarily, drink even from the gutter. The face was bloated and of a dusky red colour, almost cyanosed.

Dr. Fleurand having kindly consented to my trying my treatment on this patient, I submitted him to two periods of abstinence with purgation, each of three days' duration. There was an immediate improvement in the diabetic symptoms. The amelioration, however, was not so decided as I had expected. I was much disappointed, for I was, and I think with justice, firmly convinced of the efficacy of the treatment. Doubting whether the treatment was being carried out at the hospital as rigidly in all respects as was essential, I begged Dr. Fleurand to let me take the patient for a time to my house, where I could watch the case and direct the treatment with perhaps a better chance of success.

As I had already in my house another patient whom I had "borrowed" in a similar way from Dr. Caussade, and who had made a good recovery from a very grave condition of rheumatoid arthritis, my young diabetic, encouraged by the example, submitted himself conscientiously to the cure, which he underwent for six consecutive days. Improvement was not slow in manifesting itself, and at the end of fifteen days sugar had disappeared from the patient's urine, and the quantity passed daily had descended to 1 litre (1¾ pints).

M. Maincent, who had undertaken the analysis of the patient's urine, was astonished at this result, and suspected some trickery on the patient's part. To reassure him on the point, I brought the patient to him one day, and made him pass water in his presence. Examined immediately, the urine showed not the slightest trace of reducing power on Fehling's solution. The patient's general condition showed at the same time a most marked improvement; the hyperæmia and œdema of the face had practically disappeared.

Having progressed thus far, the patient wished to free himself from restrictions, and, when away from the house, would eat freely of things not allowed. He had a relapse, which responded readily to treatment. He did not, however, profit by the lesson, but, greedy of pleasure, continued to commit all sorts of infractions of the régime laid down, and sugar returned to the amount of 450-600 grains in a daily volume of 2 litres of urine ($3\frac{1}{2}$ pints). One day, after I had reproached him for untruthfulness and want of any serious care for his health, he left me, and I have not seen him again.

Though the case is not complete, nor the result definite, as I believe I am justified in thinking it would have been had the patient taken his condition seriously, the treatment did, nevertheless, bring about a profound amelioration of the general condition, caused on two occasions a rapid and complete disappearance of sugar from the urine, and reduced the daily volume of the latter to less than 2 litres ($3\frac{1}{2}$ pints).

DISINTOXICATION IN OPTHALMOLOGY.

In a paper read in December, 1908, I related, among a series of other cases, my own. I described the persistence and disabling character of the visual troubles for which I had, for a period of four years, been under treatment by several of my most distinguished ophthalmological colleagues. I suffered, as I then stated, from a painful sensation of tension, weight and heat in the eyes, with sudden lachrymation, which obliged me to stop reading every twelve minutes or so, and wait for five or ten minutes before I could begin again. In the course of experiments made on myself on the subject of disintoxication of the organism by the method of combined abstinence and purgation, I had the satisfaction of experiencing, together with a thorough re-establishment of my general health, a most happy change in the condition of my eyes as regards vision, and since that time, now nearly two years ago, I have been

able to work with perfect comfort late into the night, and have never been obliged to interrupt my reading or writing by any kind of ocular discomfort.

After citing the cases of three other patients whose visual condition underwent a marked improvement as the result of a cure by disintoxication, I ventured to predict that the cure, carried out with thoroughness and repeated sufficiently often, would probably have excellent results if applied in the treatment of congestive ocular troubles, even of glaucoma itself, at least in the early stage. And I appealed to my ophthalmological confrères to give a thorough trial to the method, which was not only free from danger, but from which some benefit could be looked for with confidence, even if it did not bring about a complete cure.

My appeal had the good-fortune of a favourable reception from Dr. Leprince, of Bourges, whose work on the intermittent application of X rays in the treatment of certain ocular

affections is well known. His results more than confirmed my prediction.

Dr. Leprince has sent me reports of thirteen cases in which the cure by disintoxication has been carried out. They may be divided into three groups. The first group comprises five cases of intra-ocular hæmorrhage, one of which was completely cured, while three were very greatly benefited—in fact, one might almost call them cures; the fifth case was only slightly benefited because he would only submit to one period of treatment, and that only of two days' duration. The second group consists of two cases of glaucoma : one a grave case, much ameliorated by the treatment, which brought about a great improvement in vision, and lowered the blood-pressure from 250 to 190, the cure being completed by an iridectomy carried out under the most favourable conditions ; the other a comparatively slight case, completely cured. The third group consists of six cases in which the underlying morbid condition was diabetes. In this group

four were cured, and two improved. The incomplete result in these two cases was due simply to the fact that the patients refused to submit to the treatment as often and for as long periods as was prescribed.

Here are the cases as reported by Dr. Leprince.

Case 1.—M. C., aged forty-nine, attacked in the spring of 1909 by rheumatic kerato-iritis. Treated by atropine. First seen by me May 11. Diagnosis: kerato-iritis; iris muddy, congested, not dilating well under atropine.

Treatment prescribed: Atropine, hot fomentations, aspirin internally.

May 14: Hæmorrhage into the anterior chamber. Eye very much congested; some headache. Arterial tension, 210. To continue atropine and hot fomentations.

May 15: To take a bottle of Hunyadi Janos water.

May 16: Half a bottle.

May 17: Half a bottle.

Complete abstinence from food during these three days.

May 18 : Decided improvement.

May 21 : Iris and conjunctiva less congested, vision clearer. Tension, 190.

May 26 : Slight return of congestion. Prescribed a second abstinence cure, to be carried out May 27, 28, and 29.

June 1 : Patient quite well.

Case 2.—M. R., aged fifty-eight. Intraocular hæmorrhage in right eye, with which the patient is unable to read.

May 24 : Urine shows a trace of albumin, abundant urobilin and indican in excessive quantity, together with various phenolic substances, pointing to active intestinal fermentation. No sugar. Some oxalate of lime.

Treatment : Pilocarpine instillation. Abstinence cure May 25, 26, and 27.

June 4 : Urine : no albumin, no indican, increase of chlorides, diminution of phosphates. Vision clearer ; hæmorrhage almost completely absorbed.

Case 3.—M. J., aged forty-five. Intraocular hæmorrhage, left eye, commencing June 27. Vision completely abolished in affected eye at the end of eight days. Fundus invisible.

Treatment up to July 22 : Neapolitan ointment. Iodide of potassium internally. Subconjunctival injections of cyanide of mercury.

July 22, 23, 24 : Abstinence cure.

July 29 : Vision beginning to improve. The patient can distinguish the movements of the hand ; numerous flakes in the vitreous, through which one sees the retina. Head clearer ; general improvement. Potassium iodide continued till September 10, with a second cure of three days.

September 12 : Patient may be regarded as practically cured.

Case 4. — Madame C., aged sixty-four. Right intra-ocular hæmorrhage in October, 1908, treated by subconjunctival injections. In January, 1909, the patient fell down some cellar stairs, and from that time lost entirely the sight of the right eye (optic atrophy). Influenza in February, 1909.

July 25, 1909 : General condition bad ; attacks of giddiness, headache. Vision somewhat obscured in left eye.

July 27, 28, 29 : Abstinence cure.

July 30 : General improvement.

September 1 : Improvement in vision since

the second cure, carried out in August. General health much improved.

Case 5. — Madame B., aged sixty-five. Macular hæmorrhage, right eye, in July, 1908.

July 22, 1909: Macular hæmorrhage, left eye, dating back fifteen days. Arterial tension, 220.

Treatment prescribed: Abstinence cure, July 26, 27, and 28.

July 29: No improvement. The patient only carried out the treatment for two days, and refused to repeat it.

Case 6. — Madame B., aged sixty-nine. Glaucoma of left eye, coming on in January, 1909, during an attack of influenza. Eye condition not treated.

I saw the patient for the first time on May 7, 1909. The condition of the eye was very bad, stonily hard. Only slight perception of light. Arterial tension, 250.

Treatment: Eserine.

May 11 and 12: Abstinence cure.

May 17: No reaction of pupil to eserine.

May 18 and 19: Abstinence cure.

May 26: Vision less obscured, pupil partially contracted. Arterial tension, 190. The

state of the eye allowed of the performance of an iridectomy under favourable conditions on May 30.

Case 7.—M. A. General arterio-sclerosis. Tension, 240.

Seen in October, 1909, for disturbance of vision, and threatened glaucoma. Ocular hypertension. Has had several attacks of sudden clouding of vision, and slight transitory diplopia.

Treatment prescribed: Three days' abstinence cure.

At the end of the third day the disturbances of vision had disappeared.

The patient, against my orders, began again to eat heartily (he is a large eater) and to drink wine, with the result that the disturbances of vision reappeared.

A second cure of three days removed them, and I have prescribed for the future a day's abstinence with purgation once a fortnight, careful dieting and avoidance of alcohol.

Case 8.—M. R., aged fifty-seven. Previous health generally good, except that he has suffered from slight bronchitis, with pulmonary emphysema. Weight, 13 stone

9 pounds. In December, 1907, he began to notice difficulty in reading and writing, and had occasional headaches and attacks of giddiness. These symptoms lasted on and off for about a month, but were removed by iodide of potassium, foot-baths, and a few doses of aperients.

On April 24, 1909, a subconjunctival hæmorrhage alarmed the patient. He had difficulty in reading or writing, dimness of sight and headache. Tension, 230. Treatment: KI., adrenalin drops.

May 11: General condition not improved. Arterial tension, 250. Urine contains 16 grammes of sugar per litre.

May 12, 13, and 14: Abstinence cure.

May 17: Notable improvement in the general condition. For the first time the patient is able to read without fatigue. Headaches have disappeared. Tension, 230.

May 20, 21, and 22: Abstinence cure.

May 27: Weight, 12 stone 13 pounds. Tension, 200.

Since the above date the patient has undergone two more cures of three days' duration each, and has had some applications of

high-frequency currents with a view to reducing the arterial tension.

September 15: Tension, 190. Weight, 12 stone 7 pounds. General condition excellent; urine free from sugar.

Case 9.—M. B., aged twenty-four. Diabetic retinitis, obscurities of vitreous, complete inability to read. Attacked by diabetes at the age of twenty-one, with 125 grammes of sugar per litre, and 6 litres in the twenty-four hours. The ocular affection commenced in January, 1909. In April, analysis of the urine showed 68·5 grammes of sugar per litre, and 3½ litres in the twenty-four hours.

Treatment by olive oil. Eight days after commencement of treatment there were 3½ litres of urine per diem, with 60 grammes per litre. The improvement, however, was not maintained under the oil treatment. On May 17 sugar had risen to 75·5 grammes per litre, urine 2½ litres. Arterial tension, May 17, 220.

May 18, 19, and 20: Abstinence cure.

May 21: Sugar, 15·3 grammes per litre. General condition steadily improving.

In June there was a relapse, and the

patient, refusing to repeat the cure, the sugar rose again to 75·5 grammes per litre.

Case 10.—Madame G., aged forty-eight. Disturbances of vision, asthenopia, diabetes of five years' standing. Urine, 5 litres.

May 18, 1909: Sugar, 58·5 grammes per litre. Arterial tension, 230.

May 19, 20, and 21: Abstinence cure.

May 25: Urine free from sugar. Tension, 170.

June 1: Sugar, 32 grammes. Arterial tension, 200.

June 6, 7, and 8: Abstinence cure.

June 12: Urine free from sugar. Arterial tension, 180.

From this time onwards the patient repeated the cure once a month. The patient's headaches and asthenopia have entirely disappeared.

Case 11.—Madame G., aged fifty-three. General oculo-motor paralysis (right eye), ptosis, diplopia, diabetes.

June 8: Sugar, 8 grammes per litre. Arterial tension, 220.

June 9, 10, and 11: Abstinence cure.

June 15: Static electricity applied for ten minutes.

June 26: Sugar free from urine; paralysis and diplopia have disappeared.

Case 12. — M. B., aged seventy-one. General oculo-motor paralysis (left). Diabetes.

July 15, 1909: Sugar, 23 grammes per litre. Prescription: Three days' abstinence cure. On the fourth day the quantity of sugar had fallen to 7·3 grammes per litre.

September 6-9: Second abstinence cure.

September 15: Patient completely cured, rapid improvement having set in on September 10.

Case 13.—Madame P., aged fifty-six. Obscurities in the vitreous, August 2, 1909. Diabetes. Sugar, 10 grammes per litre; urine, 1 litre in the twenty-four hours. Ordinary local and anti-diabetic treatment gave no relief.

October 4, 5, and 6: Abstinence cure.

October 7: Urine, 920 c.c.; sugar, 5 grammes.

This patient was very intractable, and refused to repeat a three days' or even a two days'

cure. She consented merely to take a purge once a month, and to abstain from food on that day. In spite of this imperfect method of carrying out the treatment, however, the sugar remained at a slightly lower percentage (Dr. Leprince).

Patients suffering from disorders of vision, and submitted for other reasons to purgation and abstinence from food (and these are, as we all know, very numerous), have almost always told me that, apart from other advantages, they have always felt great relief so far as their eyes were concerned. In many cases also they have testified to an improvement in their hearing.

The following case illustrates well the above statement:

A patient suffering from grave diabetes (300 grammes of sugar per diem), with incurable retinal lesions, could read only with great difficulty letters of 2 centimetres in height (the word *Matin* in the newspaper of that name). A few days later, as the result of

an abstinence-purgation cure, she could read with ease letters of 5 or 6 millimetres.

A still more suggestive case is the following, of a patient whom I am at present treating at my own house, whom Dr. Caussade has, so to speak, *lent me*, from his clinic at the Tenon Hospital: This patient, a man of forty, has for the past twenty years been able to work at his trade as a painter only for five or six months each year. During the rest of the time he has been crippled, and rendered almost unable to move, by severe and very painful attacks of rheumatoid arthritis. The last two years he has spent in bed, first at home and then at the Rothschild dispensary and the Tenon Hospital. It is from the latter that I took him to my house, as I have stated, as I was convinced that my treatment, thoroughly applied and repeated as might seem necessary would probably bring about a cure. My expectation was borne out, for the tophi have already disappeared, the articulations have

become mobile, and to-day, after, in all, fifteen days of abstinence - purgation treatment, taken in periods of three days, with intervals, the whole under my continuous supervision, he is able to take a walk on the boulevard.

To return to the question of eye troubles, this patient has informed me that for more than two years he has been practically unable to read, as, at the end of five minutes' reading, he has always suffered from severe lachrymation, with dimness of sight and *muscæ volitantes*, and such painful smarting of the eyes that he has been obliged to stop reading immediately. In addition, his memory failed steadily, so that he found he could not remember the little he was able to read.

At present this patient, to pass the time, reads nearly all day without the slightest discomfort or fatigue, and without glasses.

In conclusion I would make a few suggestions, (the result of a somewhat prolonged practical experience of the cure by abstinence

and purgation), which will, I hope, be found to conduce to the speedy and lasting cure of diabetic patients.

In the first place it is necessary to insist on the absolute necessity of repeating the cure from time to time, and of imposing, during the intervals, which should be gradually lengthened, a carefully restricted diet.

As regards the latter, it is my custom to complete the first period of the cure, (three or four days), by a week of milk diet, the amount of milk taken daily not to exceed $2\frac{1}{2}$ pints. At the end of this week, however satisfactory the condition of the patient, I prescribe a second period of cure, (three or four days), to be followed by a week or a fortnight of a régime mainly of vegetables, which satisfies the patient by filling his stomach, but, in reality, *under-feeds* him, the object being to continue the process of forcing the organism to live partially on its reserves and to burn off its débris. The following is a menu of the diet I generally adopt :

Breakfast: Coffee or tea without milk.

Lunch: Clear soup, salad, one or two apples or pears.

Dinner: As lunch.

As drink, tea or other non-nutritive drinks *ad lib.*

In certain special conditions I allow an ounce or so of bread, or a dish of cooked vegetables. I increase the amount of food after each repetition of the cure, taking as my guide an analysis of the urine. Since I adopted this régime, I have obtained more rapid and more stable cures, without discouraging relapses.

I wish also to draw attention to what I believe to be a deplorable error, namely, the doctrine that milk is very harmful in the treatment of diabetes. This is a mistaken view, based on a false interpretation of a single fact. It is quite true that diabetics kept on milk diet almost always pass an increased quantity of sugar. This increased excretion is, however, only temporary. From the fact of the

increased glycosuria, the conclusion has been drawn that milk is harmful in diabetes. The deduction is the result of a too superficial process of reasoning. It would be as logical to conclude that rest and warmth were harmful in the treatment of rheumatic conditions, from the fact that they lead to an increased discharge of urates. In the case we are considering, the milk merely hastens the expulsion of sugar, which is injuring and impeding the tissues, relieves the hæmatopoietic function, and contributes to a cure, if the mistake is not made of overwhelming the blood-forming organs by administering a quantity of milk beyond the metabolic powers of the liver to deal with.

I have in the foregoing brought before my professional brethren certain very definite facts. These facts justify me, in affirming with the force given by conviction, that diabetes, when not depending on any organic lesion, may be regarded in the future as one of the most easily and rapidly curable of

maladies, even when serious complications are present.

I have, apart from the question of diabetes, records of many cases of erysipelas, gout, uræmia, and other morbid conditions, treated by the abstinence cure. The results have in all cases surpassed my expectations. As opportunity offers I shall submit them to the judgment of my colleagues.

As I have repeatedly stated, the cure by disintoxication, sufficiently prolonged and repeated at appropriate intervals, produces a feeling of rejuvenation. Digestion proceeds with greater ease, respiration becomes freer, the limbs more supple, and sight and hearing more keen. The fact, however, which has always struck me with especial force is the immense gain one experiences in vigour and clearness of thought as the result of a true cerebral disintoxication.

It is to be expected that so much enthusiasm concerning the influence of the abstinence cure on the evolution of so many

and so varied conditions, both physiological and pathological, will cause many to suspect exaggeration, or, at any rate, imperfect observation of the facts, since it is difficult to believe that there exists in medicine a method so energetic in its action and efficacious against so wide a range of maladies.

I can understand as well as any this perfectly legitimate distrust. I have, indeed, felt it strongly myself, fearing that I must be the victim of some auto-suggestion, and I have only shaken it off gradually, forced thereto by the persistent eloquence of the facts.

The method I submit to the judgment of my colleagues is, however, I would venture to maintain, not merely a treatment appropriate to one or more definite morbid states, but a general factor of cure, such as are rest, a supply of pure air, and, in surgery, the principle of asepsis, which has so surely and so widely extended the range of operative intervention. Rest, pure air, and surgical

asepsis, are not merely methods of treatment of isolated maladies, but conditions necessary and applicable to the treatment of all. The method of abstinence and purgation is on the same footing, for we may denominate it without exaggeration, a method of internal antisepsis.

The future will prove, I am convinced, that its importance, its efficacy, and the range of its action, are not inferior to those of external antisepsis. As the latter in surgery, so we may hope the method of internal antisepsis will bring about, in medicine, the revolution looked for by all, the necessary revolution which shall restore to the practice of medicine the confidence and the high esteem which the great advances made in the medical sciences have so abundantly merited.

THE GUELPA TREATMENT IN DRUG ADDICTION AND ALCOHOLISM

BY

DR. OSCAR JENNINGS

THE craving for alcohol or drugs is the expression of a somatic want—of a want so imperative that it constitutes what was termed by Charcot an irresistible *besoin vital.*

Although always exaggerated by the mental condition, for which moral treatment may be necessary, it is due essentially to *ill*-ness or *dis*-ease of the body, which is relievable only by suitable hygienic dietetic or medical intervention.

Without going more particularly into the

physiological causes of craving, it may be looked upon in its totality as being constituted by factors,* which may vary in pathogenetic importance according to circumstances, but which will always be found if looked for. Successful treatment—that is, the prevention of distress during weaning from a stimulant—will depend, therefore, upon the application of the means necessary for the relief of these factors, and the measures requisite in a given case may be determined by the recognition of the exact import of symptomatic indications.

In the present chapter I shall deal only with the factors for which the Guelpa treatment is more obviously indicated, and which consist of perversions of secretion and metabolism, giving rise to the retention of toxic products manifesting their presence by different disturbances of function, such as hyperchlorhydria, paræsthetic miseries, and

* "The Morphia Habit and its Voluntary Renunciation." London: Baillière, Tindall and Cox, 1909.

other consequences of nerve irritation and vasomotor instability. For gastric hyperacidity, neutralization of the too acid secretion affords great and immediate relief, and the use of suitable alkalies has also a more far-reaching, soothing, and tonic effect, inasmuch that morphia-suppression is associated with vasoparetic capillary stasis, resulting from general systemic acidosis.

This condition may be prevented greatly in its inception by the allowance of that amount of food only which can be dealt with adequately, and no greater mistake can be made—none, indeed, which causes greater discomfort to the patient—than the unseasonable administration, during a drug weaning, of a too liberal diet, which, given under such circumstances, is one of the most frequent causes of failure or relapse. A diet, free as far as possible from xanthin derivatives and purins, restricted in quantity if necessary, greatly facilitates suppression, and is the most rapid and efficacious means of restoring

to proper equilibrium the very unstable metabolism of recently weaned drug addicts. This restriction of diet, always helpful, may be carried with benefit in some cases to the extent of complete and prolonged abstinence from food.

Fasting, it may be observed, has not yet found much favour in the treatment of drug addiction, but it is no novelty in the treatment of alcoholism, having been advised by many old medical writers, and also by theologians for mastery of the passions. More recently, Dewey, in America, and G. S. Keith, in Scotland, known in their respective countries as "starving doctors," have advocated it strongly, the former more particularly prescribing an absolute fast to be continued sometimes for several weeks.

Eight years ago, after reading Dewey's results, I tried fasting in some of my cases, and I published the history of a morphia suppression in which the patient, greatly to his wife's terror, was submitted to this ordeal

for a week. The outlook before the fast was begun appeared hopeless, but the weaning proceeded afterwards uninterruptedly, taking for its completion about half the time that had been anticipated.

Guelpa's views concerning the association of fasting with purging, which is the feature of his treatment, formed the subject of a discussion at the 1910 Meeting of the British Medical Association. They are, however, so fully set out in the preceding pages, that it is unnecessary to repeat them here. I will merely say that, since becoming acquainted with them three years ago, I have had ample opportunity of testing his method in drug addiction, and in those cases in which it has been applied by me, the results have been extremely satisfactory. As regards its application as a help towards weaning, I have no complete observations to report, for since the question has interested me, I have not met with any case presenting difficulties that could not be overcome by other measures. Besides

which, if a morphia habitué recognizes when he applies for treatment that his craving is a disease, and is willing to be guided to a certain extent, he has always been accustomed to look upon frequent and copious meals as the best means of keeping up his "stamina," and will generally prefer to undergo considerable discomfort from what constitutes for him over-alimentation, rather than abstain even partially from food.

In one instance only I prescribed the Guelpa treatment in all its rigour to a surgeon who was taking $2\frac{1}{2}$ grains of morphia daily—not with a view to suppression, for he was unable at the time to undergo treatment, as he was suffering from an acute attack of rheumatic arthritis in the right hand which prevented him from operating. In two days, not only had the inflammatory symptoms subsided, but he had also been able to reduce the ration of morphia which he had hitherto required imperatively to keep him going, to half the previous dose.

The following cases are instances of the efficacy of the treatment after suppression, and this, it may be observed, is of much greater importance, for, in drug addiction, the real difficulty is not in the weaning—as with a docile patient, really desirous of being cured, one can always be successful so far. • The danger is of relapse afterwards from impulsive imprudence and self-indulgence. A drug habitué always experiences, after renunciation, an extraordinary re-birth, a renewal of new vigour and activity, the escape from a moral prison making life twice as enjoyable as before; and in the exuberance of recovered health the ex-invalid finds it difficult to realize that his health may be less stable than it appears. Hence he proceeds to make up for lost time and to enjoy the hour, the result being that he is not infrequently pulled up sharply by some functional inadequacy. Had he in his recovered freedom been content to restrain his appetites and lead the simple life, with suitable diet, health would have been rapidly and

permanently restored; but with too free living, too much meat and stimulants, some painful or depressing perversion of nutrition or of metabolism is sure to occur, and this is the almost invariable cause of relapse.

As illustrations of the great value of the Guelpa treatment in dealing with such contingencies, the following cases may be instanced:

The first, recently communicated by the writer to the *Société de Psychothérapie de Paris*,* was one of conjugal morphinism, both husband and wife having been addicted to the habit for twenty-five years. Nothing could have been less favourable as regards prognosis, but the case terminated successfully. It was reported chiefly as an example of the difference as regards suffering between the compulsory and voluntary weaning.

In 1894, after six years' addiction, the patients in question underwent what is termed "demorphinization" by the so-called "rapid physiological method." Their suffering was

* *Revue de Psychothérapie*, March, 1911.

so great that, after relapsing, they resolved never to undergo a second "cure," and looked upon themselves as incurable. It was undoubtedly the reminiscence of their former sufferings that for a long time prevented their making a second attempt at renunciation. Notwithstanding which, the habit, of twenty-five years' duration altogether, was given up by both without difficulty or restraint; by the husband in exactly three weeks. The interest of the case resides, however, in the fact that, after a month of suppression, the patient, who is too fond of good living, found that he was feeling abnormally tired, and his suspicions were aroused by the fact that his mouth was always dry. Suspecting glycosuria, (and it may be mentioned that the patient is himself the senior physician to a large county hospital), he examined his urine, and discovered that it contained nearly 6 per cent. (58 grammes per litre) of sugar. The substitution of oat-meal biscuits and potatoes for bread and restriction in diet brought down the sugar to 10 grammes (1 per cent.). I then counselled him to apply the starving-purging plan in all its rigour, the result being that the

sugar disappeared almost entirely in three days, traces only being discoverable. Both patients are now in excellent health.

A still more interesting case is the following:

The patient, an American lady, forty-five years of age, was addicted to morphia, alcohol, and tobacco. It may be remarked that morphia prevents an alcoholic from being manifestedly inebriated, and in this case no one suspected that she was in the habit of drinking spirits. When the case came under my care, the patient was in a grave state of neurasthenia, and she remained in bed during the whole of her stay with me. She was suffering on arrival from morning-sickness, bleeding hæmorrhoids, congestion of the liver, and pain in the left sciatic nerve. In spite, however, of my representations, she continued to smoke, although more sparingly than before, maintaining that in previous attempts at suppression tobacco had helped her. The alcohol was given up, and, with the exception of the neurasthenic condition, the other symptoms subsided rapidly; but during the last week of suppression, pains in the leg, described as of a

bursting character, returned and threatened to compromise the result. It had been my intention to complete the treatment by a Guelpa "disintoxication," but the patient left without this having been done, and I was much afraid that continual smoking might, in her imperfectly restored state of health, excite an uncontrollable desire for alcohol, and this in its turn revive a craving for morphia. In order to obviate this danger it was arranged that the patient, on leaving me, was to go through a supplementary cure at a celebrated English sanatorium, and she promised to give me, from time to time, an account of her further progress.

For two months, however, I had no personal report, although kept informed as to her condition by a member of her family. Convalescence not proceeding satisfactorily, I again urged her friends strongly to persuade her to undergo the treatment I had previously recommended, and to place herself for this purpose under the care and direct supervision of a medical man.

"Mrs. C.," her doctor informed me, a fortnight later, "has gone through a Guelpa

course, and it has done her an enormous amount of good."

A few days later I received the promised report from Mrs. C. herself. In a case of this kind, where a good deal depends upon the mentality, it is as well to know how the effect of the treatment is judged from the patient's point of view. When, moreover, the malady treated is clinically a psychoneurosis, and the patient is an *intellectuelle*, as was her case, she is, I am convinced, better able to appreciate the value of the treatment in some respects than an onlooker, even though he be her medical adviser. I will supplement, therefore, the above short and pithy report, which may be looked upon as authenticating the result, by passages from Mrs. C.'s letter bearing on her physical and mental conditions, in which she analyzes her case.

"You will," she wrote, "I know, rejoice with me on my having found freedom from a hideous thraldom. I am living now largely on nuts and fruit, with a small quantity of vegetables, very little milk, and only one egg a day. This diet suits me admirably ; I find

it amply satisfying and sustaining, and I never have those black awful depressions due to dyspepsia which used to make my life a burden to me. This satisfactory state of things is due chiefly to the Guelpa cure which I went through about a fortnight ago. The food at —— did not suit me at all; it was messy and badly cooked, and though I had more in bulk than I wanted, I was never satisfied, but felt a sort of miserable dyspeptic hunger all day, even directly after meals. By the time I got home I was really wretched—too hungry not to eat, but miserable after each meal. Starvation seemed clearly indicated, so I made up my mind to follow your advice and to try Guelpa. I decided to place myself, as you had suggested, under the care of Dr. ——. The first twenty-four hours of the cure I was pretty miserable—my interior held a sort of indignation meeting against the treatment it was being subjected to. I was gnawingly hungry and empty. The second day the internal clamour had quieted down considerably, and I slept fairly well at night. The third day I was quite com-

fortable, with no real desire for food; and the fourth, I had lost sight of anything so vulgar and mundane as bodily sustenance, and would have gone on for another week if fate, in the shape of the doctor, had not intervened.

"The return to normal diet was made very gradually. Even so, I had one bad night of pain and discomfort due to eating stewed prunes which I had wickedly substituted for the baked apple which had been ordered me; but after that all went on smoothly. The dyspeptic, unsatisfied and insatiable hunger had disappeared, giving place to a merely healthy appetite, which light vegetarian meals amply appeased without leaving any legacy of digestive misery behind, and altogether I felt a new being for my seventy-eight hours' fast, and have continued to feel one ever since."

As regards absence of discomfort during the Guelpa treatment, I can now truly say *experto crede!* For whilst applying the cure in a case in all respects similar to the one related above, I went through it myself

simply from motives of scientific curiosity, eating nothing for three days, and taking each day the prescribed bottle of Hunyadi Janos; besides which I went daily to the Turkish bath. At no moment did I experience either hunger or fatigue; on the contrary, the feeling of strength, well-being, and suppleness, especially on the third day (which has been insisted upon by so many fasters), was remarkable. I have discussed elsewhere (*Westminster Review*, March, 1911) how far enthusiasm for the treatment may contribute to prevent discomfort, and how far apprehension of hunger may determine ill-effects. I will add that in the case of an old lady over eighty years of age, for whom, with Guelpa's approbation, a three days' fast had been prescribed, the patient insisted upon continuing it for a week, and no harm came of it. This was a year ago, and I have since heard from this lady that she has again applied the treatment with good effect.

In conclusion, and as far as drug addiction

is concerned, although the Guelpa treatment is not a panacea, the preceding examples demonstrate that certain difficulties which occur in the course of an attempt at renunciation may be treated satisfactorily by the application of this method, and that there is probably no better means of remedying unstable equilibrium which sometimes remains after suppression. Without, then, vaunting it as a "cure," it may be looked upon as a most valuable adjunct of treatment in many cases.

THE END

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